

Read Proceedings of Illinois Sheet Metal and New
Orleans Hardware Conventions in This Issue.
APR 15 1924
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AMERICAN ARTISAN and Hardware Record

Vol. 87. No. 15.

620 SOUTH MICHIGAN AVENUE, CHICAGO, APRIL 12, 1924.

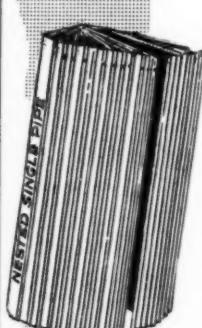
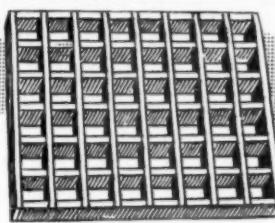
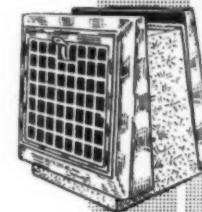
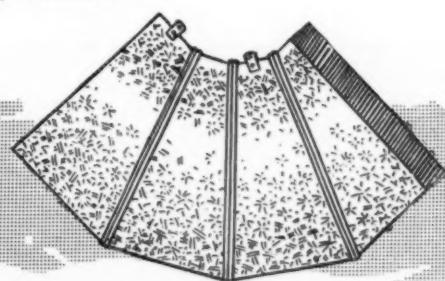
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"The Handy Pipe People
Are A Mighty Good
Bunch to Tie To"

for

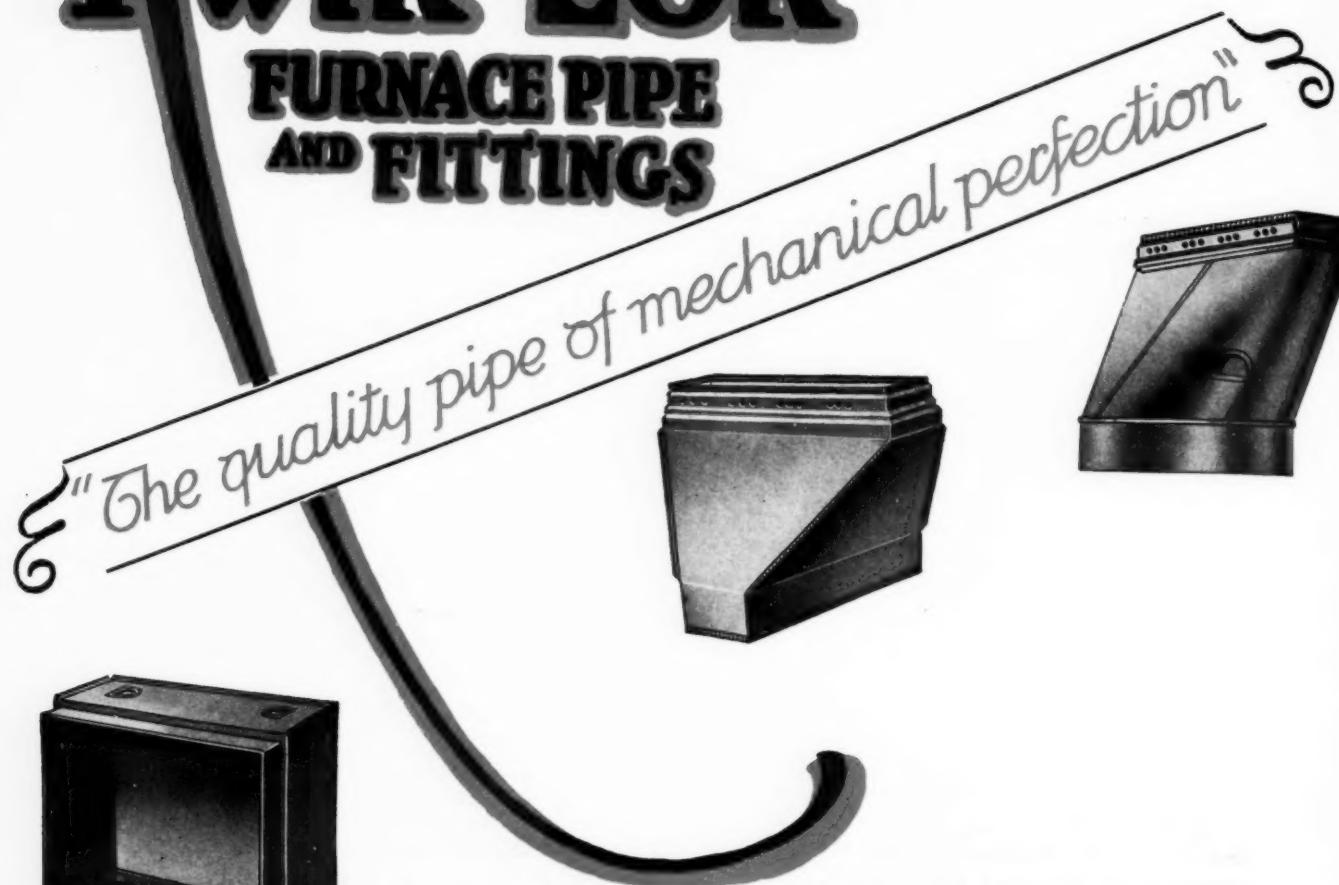
"Everything Needed In The
Installation of warm
air furnaces".

F. Meyer & Bro. Co.
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KWIK-LOK is the kind of pipe installers are using for quality and speed.

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Thoroughly Covers
the
Warm Air Furnace
Sheet Metal, Stove
and
Hardware Interests

AMERICAN ARTISAN and Hardware Record

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WHY? LET US TELL YOU!

Ask questions when in doubt. The more you ask about your business the more you will know—and the more you know, the more money you will make.

Whether you are a dealer, a salesman, a sheet metal man, an installer, or a hardware dealer, your questions will be gladly and promptly answered.

You may wish to know how to repair furnaces, take an inventory or increase the efficiency of your sheet metal shop.

Matters of law, business policy or organization may bother you. Get suggestions from AMERICAN ARTISAN concerning them.

Answers to all questions will be held strictly confidential if so desired by the sender. If no mention is made to the contrary, questions and answers will be published in the various departments of AMERICAN ARTISAN.

To House Builders and Others:
Use COPPER

Wise Advice from Emery Roth, an able architect

USE COPPER, and use brass, and don't waste money using iron, galvanized or not galvanized, where iron is not the right material. This is advice and common sense, and it is the advice of Mr. Emery Roth, a very able architect. He tells you that copper in the end is cheaper than iron, in many cases.

To a friend that asked advice about renewing the plumbing in an apartment house twenty years old, Mr. Roth said: "Put in new pipes, but when you tear out the old iron put in BRASS PIPE. Then you won't have to worry about that piping any more, as long as you live, or as long as your children live, or their children's children live."

This country wastes untold millions of dollars using wrong materials, wrong roofing, wrong piping, wrong material for cornices. You could write a book on all the WRONG MATERIALS used in building. Things intensely useful in the RIGHT PLACE are altogether bad in the wrong place.

The steel men themselves, from Judge Gary down to the smallest blacksmith, will tell you that to use iron instead of copper or brass in certain cases may be just as foolish as it would be to build the frame of a great building of brass or copper in place of steel.

The trouble is that copper men, with a few exceptions—which include John D. Ryan, of the Anaconda Copper—have not let the public know the VALUE of the products and the many uses to which it should be put.

Rust destroys every year hundreds of millions in steel and iron that could be saved by using copper, which, as far as rust is concerned, lasts practically FOREVER.

The casual remark of Mr. Roth advising a friend about using the right material in the right place interests every big builder in the country, and it interests ten times more THE LITTLE BUILDERS that cannot afford everlasting patching, repairing, painting and replacing.

You put in a leader to carry the water from your roof to the ground. Let it be made of iron or tin, and you spend your life renewing it, painting it, worrying over it. Spend a few dollars more—the difference is very small—MAKE YOUR LEADER OF COPPER, and it's there for your lifetime and other lifetimes, unless you tear it down.

Reprinted, by permission, from the editorial pages of the New York Evening Journal, and thirteen other newspapers, with a circulation of over two million readers. The public are learning the many advantages of using copper and are demanding it. Recommend it and satisfy your customers.

ANACONDA ECONOMY STRIP COPPER

Use the right metal and use it in the most convenient form.

For gutters, leaders, valleys, flashings and general roofing purposes, The American Brass Company has developed Anaconda Economy Strip Copper. It comes from the mill correctly tempered, straight and flat with edges parallel—cut to the required width ready for shaping.

Its use eliminates labor expense of recutting width and straightening regular sheets and reduces amount of scrap. In addition on account of standardized production, Anaconda Economy Strip Copper costs less than ordinary sheet copper.

If your jobber is unable to supply you, correspond with the nearest branch.

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You Must Support Your Organization and Officers if You Expect the Best from Your Association.

Editorial
of the
Week

HERE is a practice among some sheet metal and furnace men, and retail merchants generally, of permitting the officers of their organizations to do, unassisted, the association's work.

This negligence on their part to assume their just share of the responsibility shows either a lack of coöperative spirit or a misunderstanding of the purposes and objects of their affiliation.

Many of these men are laboring under the misapprehension that they are doing the association a favor by joining it and that when they mail their check for the annual dues, they can pass the right leg over the left, lean back in their swivel chair and wait for someone else to do the work.

However, quite the contrary is the case, as an analysis of the definition of an affiliation of men will readily reveal.

The dictionary describes an organization as "an associate body of persons formed for the purpose of attaining a common object."

The implied powers and responsibilities of an associated group of men collectively and individually is so readily discernable from the definition that there is no room for quandary.

It is true that every associated body has its head, in order to centralize authority, and other officers to look after the multifarious details which can be handled in no other way. These men are elected by the will of the majority, and their tenure of office is limited to obviate possible autocracy.

With the objects of the affiliation and its machinery placed clearly before him, how can any man who has pledged his wholehearted support to the association neglect his plain duty? He cannot and at the same time justify his action.

When the officers of an association, duly elected or appointed for their superior skill or

experience, deem it advisable to establish a new department in the organization, such, for instance, as a Service Bureau, they have come to that conclusion after deliberate thought and have recognized the growing need for that special service in their constituency.

Now, in order to conduct any business or department of a business intelligently and efficiently the managers must have reliable and up-to-the-minute data; in fact, business managers have built up vast complicated and often very expensive machines to enable them at all times to have the data they require.

Your association officers are not immune from this peculiar necessity. They are not unique in their needs. And being efficient men, are apt to take the most direct path in search of that information. They are apt to call upon you by letter or in person; they are apt to ask you some questions which you might regard as too personal to be answered. But remember that these men are simply trying to carry out the work for which they were appointed, and the fact that they can by word or letter make you hot under the collar, which there is no intention of doing, should be proof to you that they are on the job.

You not only should, but you must give them your support. If you don't agree with their actions, you have the power to have them changed. But as long as these men continue as your officers with your sanction, you must back them up and give them your wholehearted support.

So the next time an appeal comes to your desk in the form of a printed postal card or a mimeographed letter, don't neglect it; don't hesitate to comply with the request with the greatest dispatch. This is the least you can do to show your accredited officers that you are back of them and the organization of which you are an integral part.

Random Notes and Sketches.

By Sidney Arnold

There was a great deal of consternation among the sheet metal men at the Illinois convention, Peoria, during their 2-day sojourn in that city when news was circulated about that A. H. Schiewe, of Berger Manufacturing Company, had been married recently to a young lady from Keokuk, Iowa.

No, it was not the fact that he had been married, but rather because he had sent his bride out of town a few days before the convention that caused all of the dissension. While the trade is demanding an apology they also send the young couple their hearty congratulations.

* * *

Once in a while you find a gem in a place where you have no expectation of finding anything of much value, and the other day I ran across this bit of verse from "Poor Richard's Almanac" in a booklet on coal: These Blessings, Reader, may Heav'n grant to thee: A faithful Friend, equal in Love's degree; Land fruitful, never conscious of the Curse; A liberal Heart and never-failing Purse; A smiling Conscience, a contented Mind; A temp'rate Knowledge with true Wisdom join'd; A Life as long as fair, and when expir'd, A kindly Death, unfear'd as undesir'd.

When I read it my thoughts turned to George Carr, who passed away so suddenly a few days ago.

George did not own much land, but he had a pleasant little home, all paid for. His friends were many; he was liberal and his purse was freely opened; there was little for his conscience to bother about; he was content with making a fair return on his investment and he did.

He knew men and enjoyed the company of friends. He might

have wanted to live longer, but who shall say that the manner of his passing could leave anything to be wished for—quick, painless and yet with his body and mind in reasonably good condition, considering his age. Truly, "a kindly death, unfear'd and undesir'd."

* * *

John J. Millen, one of the Milwaukee sheet metal contractors, has a good business, but he does not let it tie him down so hard that he has



no time for play, as will be seen from the accompanying picture, which shows John and his brother, Nick, on the porch of their "shack" near McNaughton, Wisconsin, in the Minocqua district, where there is fine hunting and fishing.

In fact, John has established quite a clientele for the resort which he developed there, with cottages and other camping facilities.

His place is known as "Muskie Lake Resort."

* * *

Daniel Travers, Jr., the new Gilt-Edge representative in Michigan, had to stay over night in a little one-

street town in which all the inhabitants appeared to be on the shady side of seventy.

"People seem to live a long time hereabouts," he said to a discouraged looking native.

"You're right," agreed the other, gloomily. "But what for, beats me."

* * *

Charlie Merritt, of the Forest City Foundry folks, overheard the following conversation in a restaurant in Chicago the other night while we had dinner together:

"Is that your first husband's second wife?"

"No, I was my first husband's second wife. She is his third wife and she also was my second husband's second wife and my present husband's first wife. She and I have been bitter rivals for years."

* * *

Edmund Eitel, of "Speco" fame, tells the following story which he is willing to admit he read in a joke-smith's column:

A man left home after having a tilt with his wife. On the way down town a neighbor ran after him and excitedly exclaimed:

"Did you know a wild cat just walked into your house?"

"Did he walk in of his own accord?" enquired the man.

"Yes," was the reply.

"Then he will have to take his own chances," retorted the man, who proceeded down the street.

* * *

William Wrigley, Jr., the chewing gum king of Chicago, in explaining the rapid growth of his company, said it was all due to advertising.

"But," interrupted one of his friends traveling with him to the Pacific coast, "you have already built up a remarkable business. Why not save some of this advertising money and run along on momentum for a while?"

"Well," Mr. Wrigley said, "we have had a fine, fast trip west from Chicago so far. How much progress do you think we would make if they took off the engine?"

Here Are the Floor Plans and Elevations of Educational Research Residence at Urbana

In This Building Warm Air Furnace Tests Will Be Carried Out Under Typical House Conditions.

ON THIS and following pages are shown floor plans and elevations of the Educational Research Residence which is to be built by

"Suggestions for advanced thought on possible layouts will be welcomed by the committee.

"The whole matter has been, by

with our research staff, they are in the best possible position to arrive at correct conclusions. We can depend on their integrity and coöperation.

"All expenditures are first approved by our trustees and secondly by our executive committee, thus safeguarding in every possible way the fund set aside for this purpose.

"The trustees are to assume personal supervision during the period of construction.

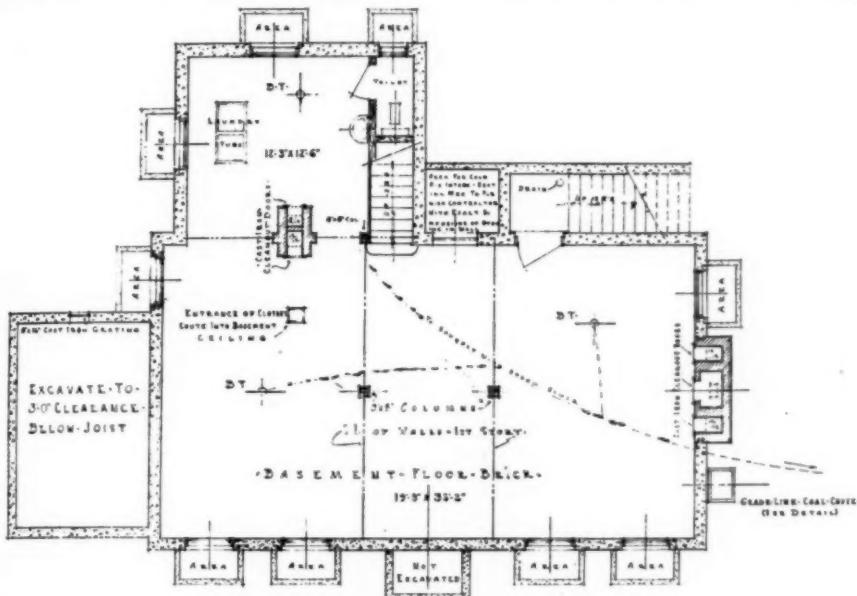
"The advisory committee will be ready at all times to coöperate.

"Materials are to be of the best.

"Gifts by manufacturers for the equipment of the residence, for advertising purposes, will not be accepted.

"All bulletins in reference to the house will have the approval of our research staff before publication.

"Members, before using for publication in advertising any data obtained by our laboratory work, should submit same to our research staff for approval.

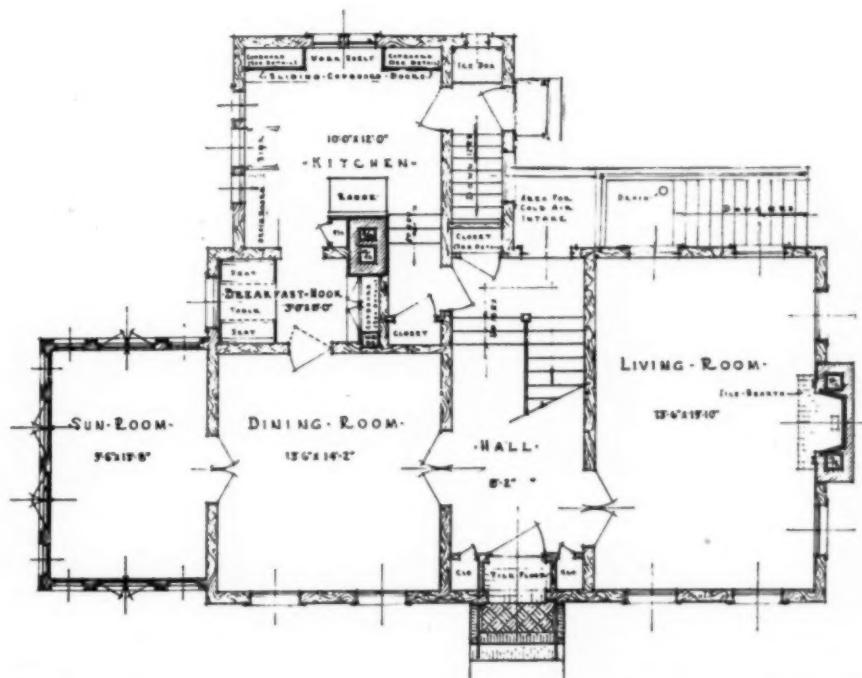


Basement Plan of the Educational Research Residence of the National Warm Air Heating and Ventilating Association to be Built at Urbana, Illinois.

the National Warm Air Heating and Ventilating Association, the building to be located near the grounds of the University of Illinois at Urbana. The contracts were let a few days ago. In this residence tests will be made, under typical conditions, of furnaces, fittings and appliances, fans, etc., the results of which will then be made public through the trade press to the installers and through the Educational Research Bureau, which it is expected will be organized this summer, to the general public.

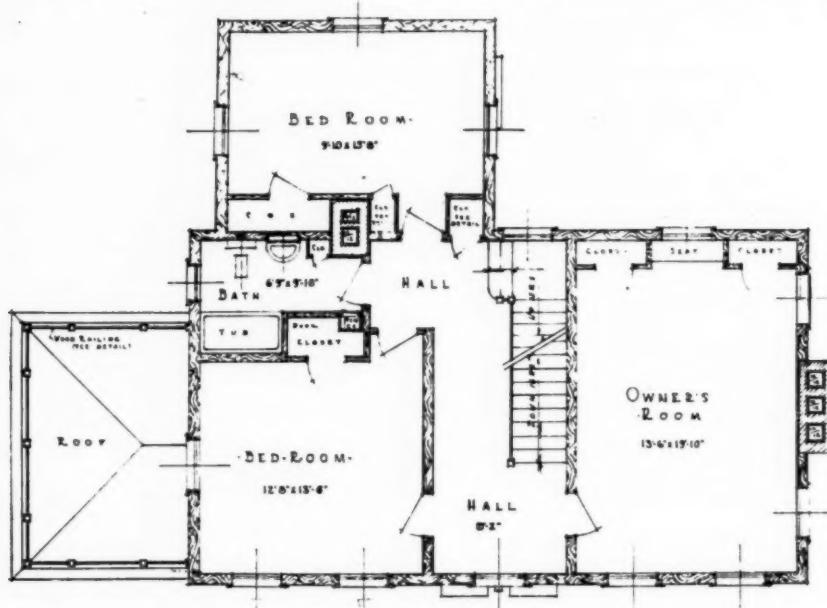
President Langenberg makes the following announcement in connection with the publication of the plans for the residence to the members of the National Warm Air Heating and Ventilating Association:

"It is planned to have every member lay out his own heating system and together with an unsigned estimate, submit same to our advisory committee.



Plan of the First Floor of the Educational Research Residence at Urbana, Illinois.

"A great deal of the work is not yet completed. Misstatements or a lack of understanding of the subject may cause untold harm to our work and for this reason the above request is made. Please observe.



Plan of the Second Floor of the Educational Research Residence at Urbana, Illinois.

"The Standard Code covering the layout for air heaters in residences will be followed in all this work.

"Air conditioning, in all its physiological relations to the human body, will become a part of this work—

- "Automatic control
- "Trunk lines
- "Smoke abatement
- "Fan circulation
- "Fuel consumption
- "Flue construction.

"These are some of the things that are in the minds of our advisory committee.

"Many more things will be thought of and if you have any original ideas that will fit into this work, you are requested, urged—yes, even ordered by humanity, to present them in writing to our advisory committee, through Secretary Allen W. Williams, 52 West Gay Street, Columbus, Ohio.

"Be proud of our work.

"The results of our research work to date are published in Bulletins, Numbers 112, 119, 120, 141.

"Information as to copies of these can be secured by addressing The Engineering Experiment Station,

University of Illinois, Urbana, Illinois.

"Each bulletin is a distinct contribution to the science of Correct Heating.

"As sponsors for this undertaking

titled to great credit for the splendid work which it has carried on so far. Still greater credit will be its due when the Educational Research Residence is completed, for then the Warm Air Furnace Industry will have accomplished something that has never been attempted on so large a scale by any similar organization.

The members of the committee, as well as the officers of the Association, have sacrificed money and a great deal of their time for the benefit of the industry as a whole, but if it had not been for their unselfish devotion it is very much of a question whether the research work which has now been carried on for five years would have been continued beyond the first couple of years.

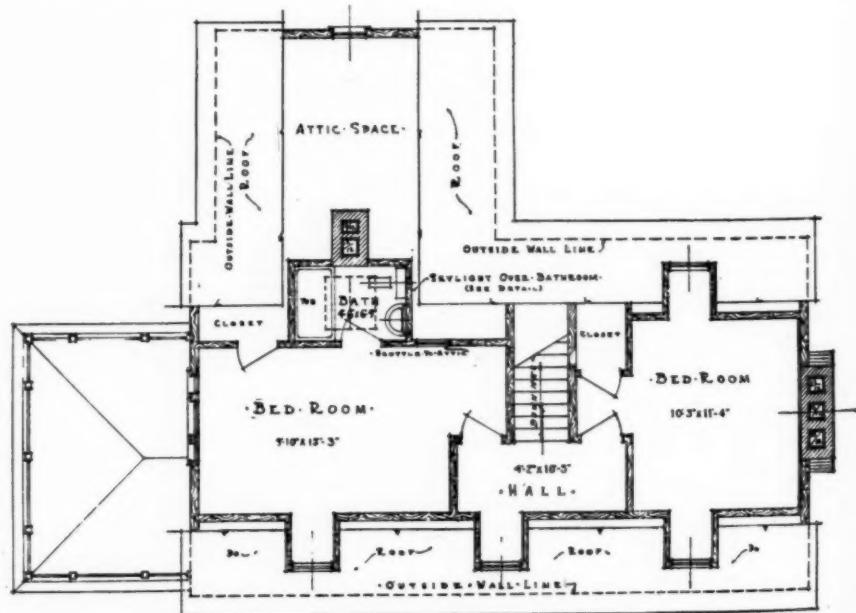
The work which has been done is of great importance to the Warm Air Furnace Industry, but that which is to be done from now on, in and by means of the Educational Research Residence, will be of far greater importance, because of the typical "practical" conditions under which the tests will be conducted.

National Warm Air Heating and Ventilating Association Meets at Cleveland Next Week.

The Eleventh Annual Convention of the National Warm Air Heating and Ventilating Association will be

the National Warm Air Heating and Ventilating Association feels gratified at the results so far obtained and, with a spirit of service to humanity and as a contribution to the world of science, is contributing loyally and generously in time and money."

The advisory committee is en-



Plan of the Third Floor of the Educational Research Residence at Urbana, Illinois.

held at the Hotel Winton, Cleveland, Ohio, April 16 and 17.

The following program will be carried out:

Reports of other officers.

Reports of committees—Standard Code, C. M. Lynch, Representative on Joint Committee.

Relation to Better Heating, A. M. Daniels, Washington, D. C.

The Association Research Work at the University of Illinois, report



East and West Elevations of the Education Research Residence at Urbana, Illinois.

Wednesday, April 16.

10:30 a. m. (Cleveland time)—Call to order.

Calling of roll.

Reading of minutes.

Educational Publicity and Trade Extension, John P. Wagner, Chairman.

Special Committee on Trade Extension, A. P. Glore, Chairman.

of Advisory Committee, C. M. Lyman, Chairman.

Report of A. C. Willard, Director; A. P. Kratz, Assistant Director; V. S. Day, Assistant Director.



South (Front) and North Elevations of the Educational Residence at Urbana, Illinois.

Communications.

Appointment of committees: Memorial, Auditing, Nominating, Architectural.

10:45—President's address, by E. B. Langenberg.

Simplification, R. C. Cook, Chairman.

Legislative, Edward Norris, Chairman.

Freight, H. C. Kanski, Chairman.

1:30 p. m.—Education and Its

Open Forum—Bring up any pertinent subject you wish discussed.

6:30—Banquet, Hotel Winton. The Entertainment Committee has provided for this special feature a menu and program that will be at-

Trade Acceptances Are Helpful in Merchandizing When They Are Used in the Proper Manner.

Invoices Have to Be Paid When Due Whether They Are Accompanied by Trade Acceptances or Not.

THE road to the place made famous by Dante and a certain type of revivalists is said to be paved with good intentions.

And no doubt the person who wrote the recent effusion sent out by "Clover Business Service" had only the very best intention when he warned merchants against issuing trade acceptance, but he put his warning in such language as to create an entirely wrong impression of these very useful commercial papers.

The author of that article would have you believe that only by the signing of a note or trade acceptance can you be held to pay for merchandise or machinery; that a signed order without such note or trade acceptance is of no value when it comes to collecting a bill, and that only by having you sign a note or trade acceptance can payment at the agreed time be enforced.

Fundamentally, there is this difference between a note and a trade acceptance, that the latter specifies that the consideration has been a merchandise transaction and that you acknowledge having received such merchandise, while an ordinary note simply states that you agree to pay a certain amount of money at a certain time, without necessarily stating what the "consideration" was.

The fact that some so-called "high speed" salesmen are making use of trade acceptances in their effort to induce buyers of furnaces to increase orders beyond the ability of the buyer to dispose of these furnaces within the specified time, has nothing at all to do with the merit of trade acceptance any more than the fact that there are thieves has anything to do with the propriety of the moral and legal commandment against stealing.

What the author of that article probably meant to "put over" was

that buyers should not let themselves be persuaded to place orders for more furnaces than they could reasonably expect to sell in a certain period, even though a lower price might be obtained by ordering a larger number—no matter whether the salesman offered to "take settlement in form of a trade acceptance."

And in this he would have been absolutely right, but when he started out to elaborate, he got in deep water, and so his advice, which was well intentioned, turned into a piece of bad advice.

A trade acceptance, issued by a reliable buyer, is a valuable com-

mercial paper—both to the buyer and to the seller: To the buyer because it enables him to keep his accounts with his sources of supply in better shape; to the seller because he can use these trade acceptances to raise money at lower rates than would otherwise be necessary.

When a purchase is made on credit the supposition is that the bill will be paid when due—with or without note or trade acceptance at the time of purchase.

Guide your purchases by your ability to sell and the capacity of your market.

Use the trade acceptance when there is a real advantage for you in using it—and frequently there is—but don't give one to a salesman just because he asks for it. Let him show you where you get something for signing it.

Owners of Residences Are Much Interested in Proper Humidification of Their Homes.

Dr. Evans Publishes Letters Showing Various Means of Bringing Heated Air to Comfortable Condition.

THE need for some reliable and sustained means by which the general public, the builder and the furnace installer may be kept correctly informed as to what is really true with regard to the warm air furnace and its efficiency is probably no better demonstrated than by the following item taken from a recent issue of the *Chicago Tribune* where it appeared in the column devoted to "How to Keep Well," which is conducted by Dr. W. A. Evans, former Health Commissioner of Chicago:

Hot Water and Steam.

J. C. R. writes: "A few weeks ago you compared the heating of dwellings with hot water and with steam. I should be glad to know the advantages and disadvantages of heating with warm air. How does it compare with hot water and steam heating in economy of fuel and healthfulness?"

Dr. Evans made the following reply:

"Heating with hot air is inexpen-

sive for installation, but is expensive for operation.

"It is difficult to ventilate when heating is done with hot air. While it is difficult to humidify in this quality hot air is intermediate between steam and hot water heating. Humidifying is easiest where steam heat is used.

"As compared with stove or open fire heating, hot air heating is more expensive to install, but less expensive to operate.

"It is more comfortable than open fire heating and, on the whole, more wholesome."

When the sort of "information" is promulgated by prominent newspapers like the *Chicago Tribune* and others who use the syndicated articles by Dr. Evans, it is certain to have considerable influence, because the readers of these newspapers naturally look upon his articles as fairly reliable both because of the reputation of the writer and the standing of the publication.

And no one will claim that such "information" does not harm the warm air furnace industry, nor will any one who really knows the facts about warm air heating maintain or admit that the "information" given by Dr. Evans is even approximately correct except in the initial statement—that "hot air is inexpensive for installation." The balance of his first paragraph is absolutely wrong.

And certainly, the entire second paragraph is nothing but a series of misstatements—ventilation is easier with warm air; humidification is more efficient and easier with warm air than with either steam or hot air.

Dr. Evans' statements are not only incorrect; the best authorities in the heating and ventilating fields admit that for house heating there is nothing better than a properly installed warm air furnace.

But the general public reads what Dr. Evans writes and when Mr. Furnace Installer comes around to try sell Mr. House Owner a furnace he has a tough job, for the simple reason that he has an axe to grind, while Dr. Evans is "serving the public" and has no other interest so far as Mr. House Owner knows, so Dr. Evans' word goes stronger than anything that Mr. Furnace Installer may say.

On the other hand, when the Educational Research Bureau of the National Warm Air Heating and Ventilating Association is organized—as we hope it will be—during the coming summer, there will be an entirely different situation, for then there will be a way to get the proper information before the general public.

Who Makes Competitive Line of Furnaces?

To AMERICAN ARTISAN:

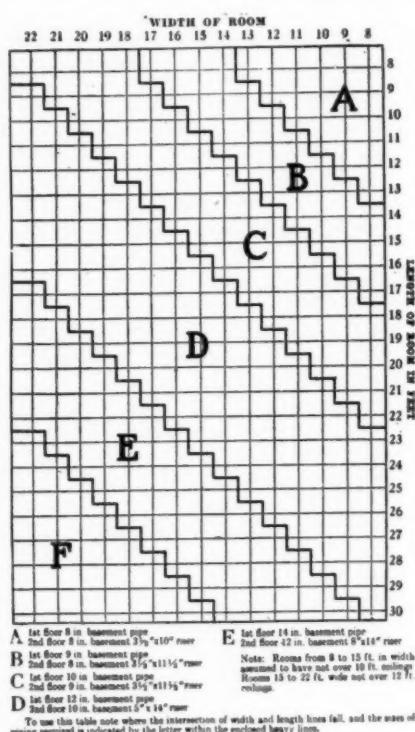
Please let me know who makes a low price cast iron or steel furnace, to be used for competition only?

Yours truly,

STANLEY F. SWANTACK.
629 Detroit Avenue,
Toledo, Ohio.

Utica Heater Catalog Contains Valuable Supplements to National Code.

Through the joint efforts of the National Warm Air Heating and Ventilating Association, the National Association of Sheet Metal Contractors and the Western Warm Air Furnace and Supply Association, the Standard Code, regulating the installation of warm air furnaces, has been adopted. This Code covers



the subject of warm air heater installation in a very careful and effective manner.

However, the recent catalog of the Utica Heater Company, Utica, New York, has supplemented this Code with some very succinct, comprehensive and time-saving short cuts. These are based entirely upon experiences and observations of the Utica Heater Company engineers and hence are very practical.

A table, reproduced herewith, which is self-explanatory, was taken from a page of the catalog. It can be used as a quick reference in determining sizes of pipe needed for the various rooms.

Various recommendations in addition to the Code supplements are also found therein. Numerous paragraphs are herewith quoted:

"There are numerous methods of determining the size of pipe to heat a given room. The simplest rule bases the pipe size on cubical contents of room, but if this method is used, it is essential to make due allowance for more than average glass surface, bad exposures, excessive distance from furnace, and other adverse conditions.

"We strongly advise the selection of heaters of ample size to do the required work. It will be found a saving in fuel, repairs and care to heater to select a size safely in excess of the actual requirements. Where outside cold air supply is used, the requirements on the furnace are somewhat greater, and this should be allowed for.

"Where soft coal—especially of the poorer grades—is used, it is advisable to use at least one size larger heater than for hard coal."

"Subscriber" Wants to Know How the Rating of Warm Air Furnace Is Determined.

Mr. Turton's Dawg will break all the furniture wagging its tail over this query.

"Subscriber" asks the following question:

To AMERICAN ARTISAN:

I should like to be informed through AMERICAN ARTISAN how the square inch heating capacity of a warm air furnace is determined; or in other words, how large should the grate, firepot casings be constructed to have the furnace deliver 380 square inches?

Yours truly,
SUBSCRIBER.

When You Find Fault with Your Job, You Find Fault with Yourself.

Your job is you. It expresses your ideals, your business integrity, your vision, your ambition, your initiative, your stick-to-it-iveness and your ability actually to do things. When you find fault with your job you find fault with yourself; for big men make big things of little jobs.

Many Agricultural Implements Require Sheet Metal Replacements Before Entirely Worn Out.

Sheet Metal Man in Country Town Can Pick Up Extra Work Among Farmers with Proper Procedure.

Written Especially for AMERICAN ARTISAN by O. W. Kothe, Principal, St. Louis Technical Institute, St. Louis, Missouri.

ANOTHER of the interesting problems found on the thrashing machine is the housing that surrounds the fan and guides the straw into the blower, which is shown in the accompanying side and end elevation. These parts wear out and must be replaced frequently, so that sheet metal men alive to the situation can round up work and can acquire a good profit from this source.

However, many employers are not so inclined to have their men study up on these things, because they feel they will either lose their men, who will seek a better class of work, or the men will immediately demand higher compensation. Because of this there are an untold number of shops perfectly willing to let much of this work go where employers

will recognize higher skill in their men and win the profit.

It would amaze most of these country town shops to know of the unusually large manufacturing plants established in various cities by various concerns who do nothing else but turn out agricultural sheet metal work.

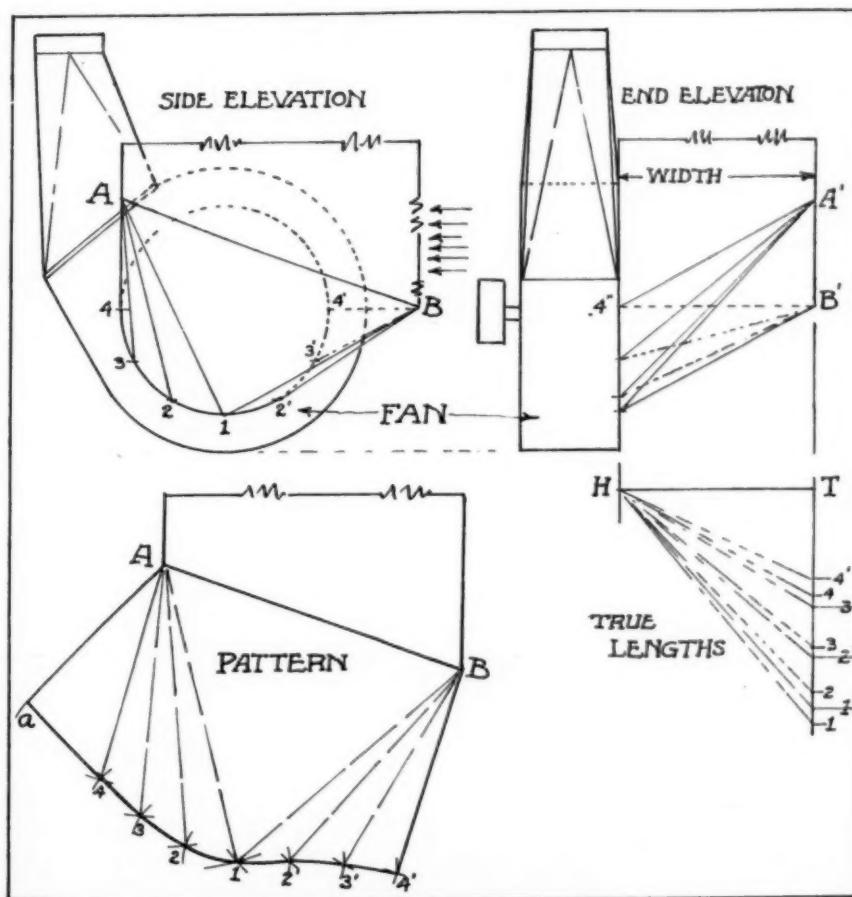
Many of the mechanics, too, are of the same mental attitude as their employers, being content with what they have and letting it go at that. Of course, for such folks there is nothing in the world that can induce them to bid for greater opportunities, even though a gold brick were placed right in front of their noses—they would be skeptical about picking it up for fear it was cemented down. The time has come

when the sheet metal man—employer and employee—must open his eyes and mind to the greater possibilities of the industry.

Wood is becoming extremely costly, especially hardwoods for all implement manufacturing; and so light steel or sheet metal is being substituted wherever possible. This does not mean for the sheet metal man to say: yes, this is sheet metal work, but I have nothing to do with it. The writer ventures to say that if every shop were to make a campaign once a year to drum up all agricultural sheet metal repair work, it could double its business within a few years; in fact, the farmer would be in line to take on suggestions for making specialties designed by the shop, all of which would be profitable to both the shop and the customer. But, of course, to all those shops which do not care to make the effort, it is doubtful that they ever take the effort to read these appeals to encourage them to better help themselves.

But to continue our problem, we first draw the side and the end elevations, drawing in the opening in the blower as measurements require, as well as the width and the slant line A-B. Conditions on the machine must suggest how far the metal is to rise on the blower. In this case it goes half way, and thus develops a semi-circle and draw lines to the corners A and B. To whatever the machine would be designed to, these measurements would have to be laid down and worked out accordingly. The width of the end elevation is all that is needed as 4"-B', which is placed as H-T.

Pick the triangular lines from the side elevation, as A-1, A-2, A-3, A-4 and B-1, B-2', B-3', B-4', and set these lines down from T, as 1-2-3-4, also 1'-2'-3'-4'. When lines are



Pattern of Blower Cover.

drawn to H, we have the true lengths. To set out the pattern we draw a line, as A-B, equal to that line in the elevation, and then pick the true lengths, H-1; using A as center, strike an arc as at 1; then pick the true length H-1', and using B as center, cross arcs in point 1. Next pick the girth space 1-2 from side elevation, and using point 1 in pattern as center, strike arcs as at 2 and 2'. Now, with true lengths H-2 and H-2' we use centers A and B, crossing arcs in points 2 and 2'. Then strike small arc 3 and 3' equal to the space 2-3 of elevation, and then cross these arcs with true lengths H-3 and H-3', using A and B as centers. Continue in this way until points 4 and 4' are established.

Then to add the triangular side as A-a-4 we pick the offset as A-4 and set it as 4-a, and then the line A-a is made equal to the width of end elevation, or B'-4''. This enables drawing lines through all points where arcs cross, and the pattern is finished. The side or end pieces would be built onto these edges to suit the construction of the machine, and whatever that would require the workman would have to fill in as best he could, since it is largely just straight work and only requires flat sheets with flange edges turned on one or two sides. The manner of making seams and joints should be copied direct from the old work, so there will be no difficulty or confusion during assembling.

D. M. Strickland Discusses Problems Constantly Met with in Sheet Metal Work.

Tells Sheet Metal Men at Peoria Artificial Coatings Have Two Purposes—To Protect and Beautify.

THE following is a resumé of the discussion presented by D. M. Strickland, manager, Development Department, The American Rolling Mill Company, Middletown, Ohio, before the Illinois Sheet Metal Contractors' convention held in Peoria, Illinois, April 9 and 10.

Artificial coatings are usually applied to sheet metal and ferrous metal products for two reasons; namely, for protective purposes and to beautify the installation.

Although there are many varieties and types of coatings, they can be classified in five general groups or divisions:

1. Metallic.
2. Non-metallic.
3. Temporary.
4. Paint.
5. Miscellaneous.

Any metallic coating is either electro-positive or electro-negative to the base metal. The electro-positive coating, such as zinc, has the desirable characteristic of protecting the iron beneath by sacrificing itself. A slight break, pin-hole or uncoated edge of metal is not dangerous as zinc compounds

tend to plate over any exposed iron, thereby extending its service life. On the other hand, electro-negative coatings, such as tin, lead or copper, have just the opposite effect. An uncoated metal edge or pin hole is most undesirable as the exposed base metal corrodes rapidly and pitted corrosion or localized failure is hastened.

Zinc, an electro-positive coating, is usually applied to cleansed metal by one of four processes:

1. Hot dipped.
2. Electro deposition.
3. Spraying.
4. Sherardizing.

For sheet metals the hot dipped process is almost universally used and permits the application of a uniformly distributed coating of sufficient thickness to give real protection. Unless the hot dipped process, however, is carefully standardized, the galvanized coating may be most unsatisfactory. Analysis of the spelter, regulation and control of temperatures and other vital steps in the coating practice must necessarily be studied and definite practice maintained.

Tin, lead or alloys of these metals are usually applied by a hot dipping process. Metallic copper or nickel are electro-deposited.

Magnetic oxides and phosphides typify non-metallic coatings, the oxides being produced by heating the article in carbon monoxide, producer gas, air or other gas for various periods of time, at predetermined temperatures and in the gaseous atmospheres in various order, depending upon the manufacturer's particular established practice.

Temporary coatings are just what the name implies—used to protect sheets during shipment or between various steps in fabricating operations. Phosphoric acid compounds, slushing oils, cheap paints or thin tar mixtures are often employed.

When painting ferrous metal installations great care must be taken. The surface of the metal must be absolutely dry, otherwise corrosion may take place under the paint or paint peeling difficulties may follow. The choice of paints is important, as all paint pigments are either inhibitors, indeterminates or stimulators. A stimulator should not be used as a ground coat as not only will the paint film be subject to a certain degree of deterioration but because of its character actually hastens the corrosion of the base metal. When it is necessary to paint any surface which is already rusty, all rust should be completely removed before the paint is applied.

Lacquers, japans, porcelain enameling and other special coatings can be classified as miscellaneous.

The choice of the base metal is a deciding factor in prolonging the life of sheet metal installations. It has been found that the best base must be homogeneous, scientifically degassified and as nearly a pure iron as possibly can be secured. Such iron will not only carry a purer and longer lasting zinc coating but tenaciously holds a coat of paint as well.

One mistake in an advertisement will attract more attention than ten correct statements, but it will not sell the goods.

Illinois Sheet Metal Contractors Enjoy Unusual Hospitality of Travelers' Auxiliary at Peoria.

Eleventh Annual Convention Voted Great Success by Those in Attendance at Jefferson Hotel, April 9 and 10.

THE late Frank Bacon's play, "Lightnin'," contained a reference to the city of Peoria, Illinois, which, if it had been said off the legitimate stage, would undoubtedly have created in the mind of the listener an entirely false impression of this truly beautiful city in the south central Illinois.

Peoria is situated on the banks of the Illinois river, whose scenery has been commented upon by tourists from many states, and the selection of this city for a convention by the Illinois Sheet Metal Contractors' Association, April 9 and 10, is just another evidence of the extraordinarily good judgment which these men are continually displaying.

The Jefferson Hotel was used, and the meeting of the board of directors took place Wednesday morn-



A. J. Hermsdorfer,
Retiring President Illinois Sheet Metal Contractors' Association.

ing before the regular session.

The convention was called to order by C. N. Louis, Vice-President of the Sheet Metal Contractors' Association of Peoria.

The address of welcome was made by E. N. Woodruff, Mayor of Peoria.

The response to Mayor Woodruff's address of welcome and the President's annual address were made by President A. J. Hermsdorfer.

The latter address is given hereinafter:

Address of President A. J. Hermsdorfer.

Mr. Chairman, sheet metal contractors, traveling salesmen and guests: I am pleased to see so many of you here to help make this convention a success.

Our Association has passed another mile stone in its history, and we can safely say that the year just closed has been a satisfactory one for our organization.

Our reports will not show as many new members as I should have liked to see.

I have tried to fulfill my obligation as president with the best efforts in my power. But there is not the coöperation as there should be among the members and the committees.

It is your Association as well as the officers, and every good business man should consider it not only a duty to contribute his share of responsibility, but a pleasure and a mighty good investment as well.

In my judgment it is becoming more and more the accepted viewpoint that not alone industrial peace, but world peace as well, is only possible through widespread coöperation.

No two individuals are constituted precisely alike, given and agreed statements of facts, it frequently happens that different intellects sense the salient points of a problem from wholly different angles.

There are, however, four things to consider to make your business success: Friendship, good fellowship, honesty, and coöperation.

Be friendly to your customers

and fellowmen, do your work so you will be proud of every job, be honest in your work and in your charging, be a good fellow, join and coöperate with your fellow competitor, do your share, become acquainted, exchange ideas and infor-



Charles N. Louis,
President-Elect Illinois
Sheet Metal Contractors' Association.

mation, discuss business policies, lay aside your grievances.

Sheet metal firms who are organized in many cities find the association the most profitable feature of their business.

However, the organization of sheet metal firms does not cause labor trouble; in fact it prevents this and is prepared to meet it when it does occur, organized employers have less trouble than the unorganized.

This association is for all firms, large or small, the man with the small business will receive the same benefits and mutual protection as the large firm; in fact, the smaller the business the more need for this mutual protection, helps them financially and raises the standard of business practice.

Look where you may, you will find that trades and professional men

are already thoroughly organized or are rapidly becoming so.

Manufacturers, dealers, laborers, all are thoroughly organized, individually they fall, collectively they stand.

Sheet metal contractors have received valuable benefits from the state association, whether they belong to it or not.

Some of them believe in receiving without giving; they are willing to enjoy any benefit which might accrue through the efforts of others.

I want to commend the Rock Island and Moline Association for its good work in doubling its membership.

I wish especially to commend the Traveling Salesmen's Auxiliary for the coöperation it has given the state association.

I wish to thank the trade press, all the officers and members of the association, and the traveling salesmen who assisted in any way to make my administration a success.

The following committees were then appointed by the President:



Fred Gross
Retiring Secretary Illinois
Sheet Metal Contractors
Association

Auditing—Markle, Alton; August Schleipering, Quincy, and Walter Dennis, Decatur.

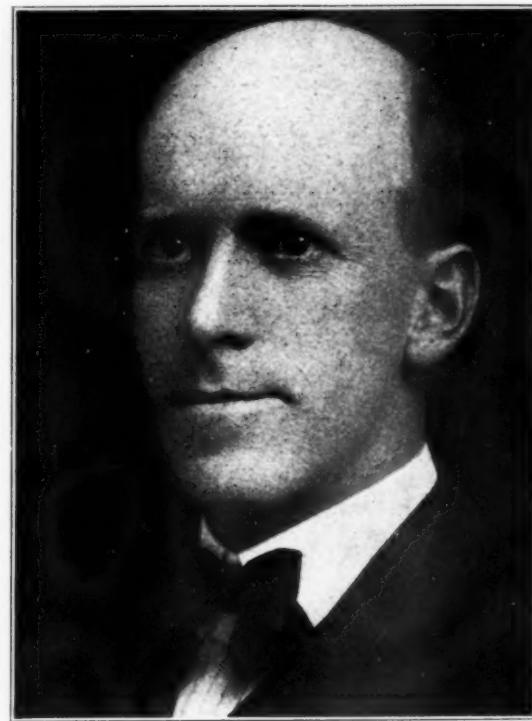
Resolutions—Harry C. Knisely, Chicago; George Harms, Peoria, and C. C. George, Springfield.

Credentials—A. H. Zillman, Danville; Charles Spindler, Peoria, and Louis Narowetz, Chicago.

Question Box—“What Can We Do to Put Sheet Metal Cornices Back?” conducted by George Harms, was the subject of discussion at the morning session.

manufacturing proposition and that the local sheet metal contractors are getting back on the job with shop-made cornices.”

Julius Gerock, St. Louis, whose



Charles H. Robinson,
Retiring Vice-President Illinois Sheet Metal
Contractors' Association.

Charles N. Louis pointed out that the chief reason was the use of poor metal and slip-shod work.

J. J. Foster, Springfield: “Good work, using good material, and advertising to architects, will help to bring sheet metal cornices back.”

H. C. Knisely emphasized necessity for aggressive work with architects, and cited the Chicago City Hall as an outstanding example of poor terra cotta cornice which has to be repaired now at a cost of \$100,000. He advised the use of the address of George Harms at the Wisconsin convention in their selling arguments.

Rudolph Jobst: “We must do the work which is necessary to get sheet metal cornices back. Work on the owners and architects, showing them the real advantages of well-built sheet metal cornices.”

George Harms: “One of the principal manufacturers of pressed metal cornices stated that this particular work is losing ground as a

company makes a large quantity of stamped cornices, stated that when good quality material and work is had, stamped cornices are still being used.

Mr. Harms concluded with a short resume of the address which he delivered before the Wisconsin Association, which was published in full in the March 15th issue, on pages 47 to 48 of *AMERICAN ARTISAN*.

He urged that the Illinois Association appropriate a sum of money to place sheet metal cornices in the proper light with architects and builders.

President Hermsdorfer cited the Adams County courthouse, which was built in 1876. The rock tower had to be repaired at a cost of \$16,000, while the galvanized gutter work was still so good that less than \$400 had been spent for repair. He emphasized need for coöperation in this matter, as in everything else in business.

Mr. Louis also urged that a specific sum be appropriated from the treasury to advertise sheet metal cornices to architects.

Mr. Foster suggested that an assessment of three dollars per member be made for the purpose, and that a committee of three be appointed to work up a plan for advertising.

Mr. Harms made a motion that the Illinois Association coöperate with other states and the National Association to advertise sheet metal cornices.

The Board of Directors was authorized to appropriate such funds as may be found necessary to start this work.

The session adjourned at noon.

The Wednesday afternoon meeting was opened with the reading by Secretary Fred C. Gross of the minutes of 1923 convention.

This was followed by an address on "What the Copper & Brass Research Association Is Doing for the Sheet Metal Contractors," by George A. Sloan, Secretary Copper & Brass Research. This address appears under a separate head on another page of this issue.

The Question Box discussion was led by George Harms, the first sub-

naces, because of the generation of certain noxious gases which get into the pipes.

E. B. Langenberg gave it as his opinion that the oil burner industry is in the same position as the auto-



R. J. Jobst,
Elected Secretary, Illinois
Sheet Metal Association.

mobile industry was in twenty years ago—a stage of experimentation and lack of standardization—and that much improvement must be made before the oil burner can be classed as a success. He believed, however, that somebody would perfect a burner that could be used with satisfaction in a furnace.

R. B. Strong looked to see the burner men develop a satisfactory appliance before the furnace manufacturers would recommend them.

George Harms stated that he had used a Williams Oil-O-Matic oil burner for three years with full satisfaction. His advice is, however, always to his customers not to guarantee any oil burner. Let the oil burner manufacturers do the guaranteeing.

"Does a State Association Pay?" was the second question.

President Hermsdorfer cited instances of laws being either passed or killed, the result of which meant a saving to every sheet metal contractor of many more dollars than the membership cost.

The President suggested that the Illinois Association follow the example of the state associations in Michigan and Ohio, where paid secretaries are now proving a highly

profitable investment, and in Iowa, where they have just made arrangements for a full time paid Secretary.

The afternoon session adjourned about 3 p. m. and a procession of waiting automobiles took about 120 members, ladies and guests for a most enjoyable ride through the city's beautiful and extensive park system. The scenery along the Illinois river at this particular spot is very picturesque and romantic, and was enjoyed by the guests.

The banquet tendered by the Traveling Salesmen's Auxiliary was a splendid success.

The address of welcome was made by Sam P. Burgess, President of the Travelers' Auxiliary.

Rudolph J. Jobst, Peoria, Illinois, was selected as Toastmaster and carried out his duties to a perfection.

A. J. Hermsdorfer, when called upon, complimented the Auxiliary and the Peoria local for the excellently arranged convention program, and especially the banquet.

George Harms spoke briefly about the Sheet Metal Book which has been under preparation for some time. The book when completed will describe proper sheet metal construction and it will be profusely illustrated.

E. C. Fischer, Superintendent of Peoria public schools, spoke very



Harry Knisely,
President Sheet Metal Con-
tractors' Association of
Chicago.

enthusiastically on "Vocational Education." His introductory remarks evolved about the making of a man. Warming into his subject, he told about the importance of the responsibilities connected with the proper



James Barrett,
Re-elected Treasurer
Illinois Sheet Metal Con-
tractor's Association.

ject being, "Is the Oil Burner a Success in Warm Air Furnaces?"

E. W. Menk stated that so far as his experience went he would hesitate to state that any oil burner could be called satisfactory in fur-

vocational guidance given the student. Then getting into his full stride, he explained the desirability of giving the student the proper understanding of vision and a proper knowledge of the service which he is rendering to humanity, not only in his own community, but throughout the world. Thus he brought his remarks to the vortex by showing how the student was brought by a perfect understanding and alignment to throw his whole soul into the work which he had chosen for his life's occupation.

Richard P. Bradley, whose real occupation in life is enlarging the hip pockets of young men's trousers—tailoring—but who is by nature a humorist, gave a humorous address at the banquet.

There were approximately 200 guests present to accept the generous hospitality of the Travelers' Auxiliary, and the fifty ladies present received beautiful "Compacts" as souvenirs of the banquet.

Perhaps at this juncture it will be well to insert that well deserved special commendation for the enter-



J. B. Sauer
Re-elected Treasurer
Travelers' Auxiliary

tainment committee, of which A. H. Schiewe, Peoria, was chairman. F. I. Eynatten, Peoria, and O. T. Ingledeew, Chicago, were his running mates. Due to the unusual energy and untiring efforts of Chairman Schiewe and his two fellow workers, the guests to Peoria were roy-

ally entertained, and nothing was omitted which could add in any way toward making their stay in Peoria a most pleasurable and long to be remembered event.

Thursday, April 10.

The Thursday morning session was opened with the address by Frank E. Smith, President of the Clark Smith Hardware Company, Peoria, Illinois, on "Some Changes." Excerpts of this address will be found on another page of this issue.

D. M. Strickland, of the American Rolling Mill Company, Middleton, Ohio, spoke extensively on "Sheet Metal Problems." This address also will be found on another page of this issue.

President Hermsdorfer appointed the following committee to act on and to carry out the metal cornice publicity program spoken of heretofore by George Harms: George Harms, Peoria; Griff J. George, Springfield; President Hermsdorfer, Quincy.

The Treasurer's report indicated the association to be in a good financial condition, with over \$900 on hand.

The committee on resolutions reported a resolution to be adopted thanking the officers for their good during the past year. A resolution to thank the Auxiliary for its generous help in making the convention a success.

Resolutions were also adopted expressing the regret over the passing of George B. Carr, Chicago; and Frank Chew, Sheet Metal Worker, New York.

Last year's action to have a registration fee at the state convention was stricken from the records after a plea was made for this action by Charles Louis, Peoria.

The election of officers resulted in the following named men being placed into office.

President—Charles Louis, Peoria.

Vice-President—G. J. George, Springfield.

Secretary—R. J. Jobst, Peoria.

Treasurer—James Barrett, Alton.

Peoria was again chosen for the convention city next year, following the invitation by Mr. Jobst.

The Hosts.

B

Baugh, L. Max, Meyer Furnace Company.
Beckwith Co., The.
Beeth, Frank E., Kruse Company.
Bishop, Charles H., Sheet Metal Worker.
Blanchard, R. W., Hart & Cooley Company.



Frank I. Eynatten,
Re-Elected Secretary
Travelers' Auxiliary.

Bloomfield, Fred, Manny Heating & Supply Company.
Bourscheidt, Oscar, A. M. Castle & Company.
Britt, S. P., Lennox Furnace Company.
Burgess, Sam P., Rock Island Register Company.
Burton, S. D., National Stamping & Enameling Company.

C

Carr, Dale V., Carr Supply Company.
Chandler, Joseph B., Republic Metalware Company.
Chapin, A. W., Rising & Nelson Slate Company.
Cohn, Etta, AMERICAN ARTISAN AND HARDWARE RECORD.
Colebrook, T. H., Steelcote Manufacturing Company.
Cox, Harry E., Berger Manufacturing Company.
Cox, Thomas W., Haynes-Langenberg Manufacturing Company.
Cross, J. W., Standard Metal Company.

D

Denoyer, L. A., Canton Art Metal Company.
Ditchett, John, Jr., Houston Brothers Company.
Duckette, W. D., Joseph T. Ryerson & Son.

E

Elder, Franklin V., Wheeling Corrugating Company.
Engman, A. E., Aeolus Dickinson Company.

Evans, Phillip D., Walter G. Clark, Incorporated.
English, E. C., Sykes Company.
Eynatten, F. I., A. A. Bushell & Son.

F

Farris, Joseph, Farris Furnace Company.
Foley, D. F., American Rolling Mill Company.
Friedley, A. L., Friedley-Voshardt Company.
Fraser, F. L., Abram Cox Stove Company.

G

Gerock, Julius, Jr., Gerock Brothers Manufacturing Company.
Glaser, F. G., Green Foundry & Furnace Works.
Graunis, William, Rock Island Stove Company.
Glessner, Charles E., Excelsior Steel Furnace Company.
Griffith, E. E., Tanner & Company.
Grubbs, Paul F., Follansbee Brothers Company.

H

Hanisch, R. T., Baltimore Copper Smelting & Rolling Company.
Harms, George, F. Meyer Brothers & Company.
Harms, William G., Rock Island Register Company.
Harrison, H. R., Rudy Furnace Company.
Henninger, J. G., J. M. & L. A. Osborn Company.
Hogan, Charles S., Youngstown Sheet & Tube Company.
Holch, J. G., Milwaukee Corrugating Company.
Holtz, R. W., Berger Manufacturing Company.
Hopkins, G. A., National Lead Company.
Houston, W. S., Dallas Brass & Copper Company.

I & J

Ingledew, O. T., Scully Steel & Iron Company.
International Heater Company.
Johnson, P. A., Charles Johnson Company.
Jones, H. C., Tanner & Company.

K

Kallister, C. E., C. E. Kallister & Company:
Kellerstrass, Charles H., Nichols Wire Sheet & Hardware Company.
Kelley, William T., Scully Steel & Iron Company.
Keller, C. J., Art Stove Company.
Ketchum, A. E., Wheeling Corrugating Company.
Knisely, Harry C., Harry C. Knisely Company.

L

Laffin, William P., Tuttle & Bailey Manufacturing Company.
Langenberg, E. B., Haynes-Langenberg Manufacturing Company.
Lorenz, John M., Chicago Furnace & Supply Company.
Lorenz, P. M., Inland Steel Company.

M

Mackey, R. E., Stockhoff Supply Company.
Manny, J. H., The Manny Heating & Supply Company.
Masten, Harry G., Lincoln Steel Company.
Menk, R. W., Excelsior Steel Furnace Company.

N

Nebel, E. A., Nebel Manufacturing Company.

Niehaus, H. J., Follansbee Brothers Company.
Norman, E. W., Merchant & Evans Company.
Norris, Robert F., C. E. Kallister & Company.

P

Pedersen, A. G., AMERICAN ARTISAN AND HARDWARE RECORD.

Perkins, J. L., Purdom, M. L., Hammond Sheet Metal Company.

R

Robinson, H. E., Robinson Furnace Company.
Ross, A. J., Henry Furnace & Foundry Company.
Rush, R. J., Nichols Wire Sheet & Hardware Company.

S

Sauer, J. B., Meyer Furnace Company.
Schiewe, A. H., Berger Manufacturing Company.
Schneider, G. B., Clark Smith Hardware Company.
Scott, Edwin A., Edwin A. Scott Publishing Company.
Spindler, Charles, F. Meyer & Brother Company.
Symonds, W. H., Symonds Register Company.



True-to-Life Pictures of Ralph Blanchard When He Was Called Upon for His Usual Speech. No Banquet Goes Right in His Opinion Unless He Has a Call.

Strong, R. B., Homer Furnace Company.
Strong, John T., Culter & Strong Stove Company.
Suck, O. B., J. H. Heimbuecher Metals Company.
Smith, M. L., Culter & Proctor Stove Company.

T

Tenk, R., Tenk Hardware Company.

W

Waite, J. M., American Porcelain Range Company.
Walker, Roy C., Meyer Furnace Company.
Whitmer, Robert P., American Foundry & Furnace Company.
Whitmer, L. G., American Foundry & Furnace Company.
Wiechert, Arthur F., St. Clair Foundry Corporation.
Wilkening, F. A., Standard Metal Company.
Williams, H. E., Wise Furnace Company.
Wrede, William, Republic Metalware Company.

Send us copies of your advertisements.

Traveling Salesmen's Auxiliary Holds Good Meeting at Peoria.

The Traveling Salesmen's Auxiliary to the Sheet Metal Contractors' Association of Illinois held its meeting at Peoria during the convention of the parent organization.

There was a representative group of live wire salesmen on the job at the meeting and many were the glad handshakes exchanged among the happy association.

The election of officers was as follows:

President—O. T. Ingledew, Chicago.

Vice President—William P. Laffin, Chicago.

Secretary—F. I. Eynatten, Peoria, re-elected.

Treasurer — John P. Sauer, Peoria, re-elected.

Sergeant-at-Arms — Herb Symonds, St. Louis.

Father of Joseph Mattingly, Indianapolis, Buried Saturday, April 5.

The heartfelt sympathy of the entire sheet metal fraternity goes out to Joseph Mattingly, Smithers Roofing Company, Indianapolis, and his family in their recent bereavement caused by the death of Mr. Mattingly's father, who was buried Saturday, April 5.

The younger Mr. Mattingly is a very prominent and active member of the Indiana Sheet Metal Contractors' Association and he has a host of friends.

Frank E. Smith Admonishes Sheet Metal Men to Use Their Expert Knowledge for Customers.

Head of Clark-Smith Hardware, Peoria, Says Simply Doing a Job for a Customer Is Not Serving Him.

The following are excerpts from the address of Frank E. Smith, President of Clark-Smith Hardware Company, Peoria, Illinois, delivered at Illinois Sheet Metal Contractors' convention, Peoria, Illinois, April 10:

Someone has well said "There is nothing so changeless as change" and study of history, of all kinds—that shown by the bones of long extinct animals, buried deep in ancient strata of the earth's crust, as well as the more recent or modern

spent in making tinware, from tin cups to wash boilers and, also, all kinds of special jobs which people brought in to have made up for them. Two apprentices were allowed to do repair work if it fell within their ability and skill and were all the time taught to do better work and to do a quick and neat job of soldering. You know as well as I how far from it some of them got. All of the tinners were required to be able to make up such ware. I do not know what proportion of men

In 1855, Sir Henry Bessemer patented his process of making steel from pig iron and one of the great changes for the benefit of civilized man and his wants was on. It was a number of years after this, possibly twenty-five or thirty, before the making of sheet steel instead of iron got under headway in this country, and since then the production of our steel mills has increased so enormously as to be almost unbelievable and sounds like a tale from Arabian Nights.

The open hearth process is a later development than the Bessemer and, for some purposes, appears to give better results.

It has been found by test of time that for resistance to corrosive influence in atmospheric conditions,



records which have been and are now being explored—seem to prove the slowly evolving continuous changes which in their course have led up to the present stage of man and his advancement in knowledge.

In less than fifty years have occurred changes which have seemed almost revolutionary, but which instead have been a part of the slow process of evolution which rolls on through all the ages.

This evolution seems to be well described by Tennyson in his poem, "The Brook": "Men may come and men may go, but I go on forever."

As a boy, my work required me to spend much of my time in and about the tinshop. In the tinshop I have in mind were eight or ten tinners and much of their time was

you now have in your shops who could lay out and make up coffee pots, tin pails and other articles of common use, but I dare say the proportion is small.

One of the materials of common use was sheet iron, not sheet steel that we now know, but sheet iron; a material resembling somewhat in appearance that which is of present day use, yet not the same by any means. This sheet iron could be double seamed across a sheet but not with its length. Whenever a tinner tried to make a sharp break along the length of the sheet, the trial would be followed by a good deal of explosive oratory which sounded very much like "cussing." It could not even be trusted for making a right angle break.

addition of a small amount of copper gives a considerably greater life to the sheet steel and makes it of much greater value to the consumer than the steel that does not have the copper contents, for the additional cost is a trifle as compared with the additional life of the steel when exposed to weather.

At the time to which I refer there was a material of common use called Russian iron. This was a smooth, glossy surfaced iron and was, as its name indicates, a Russian product. It was packed in bundles of about 5 feet in length and wrapped in a tough fibre matting. Upon opening the bundle there would be found sheets of uneven length and sometimes the ocean air had been able to get on the inside and evidence was

there in the shape of rust spots. There was no recourse and all we could do would be to make the charge for the good material high enough to cover the loss.

An American company about this time brought out a product which they called Wood's Planished Iron and proceeded to put it upon the market. It was packed in moisture-proof cases, the sheets were of even length, and the product rapidly replaced the Russian in this market.

In the early 90's, under the lead of William McKinley, a tariff bill was enacted which assessed a charge upon tinplate imported into this country, and as a result a great number of tinplate manufacturing plants were established and began operations.

through the imported tinplate and assorted it, taking out any that had pin holes or other defects and giving the good sheets only to the men to prepare for the roof. This practice seems to have fallen into disuse and marks one of the changes which have occurred.

Trouble soon followed. Then came a period full of theories of this, that, and the other thing, offered as cures for the trouble, which trouble came principally from one source which no one dared to correct. The mill managers in their effort to show proper costs or reduce those previously established kept calling for increased production, greater tonnage output, and the result was that plates which should have been sent to scrap or sold only

per cent lead. That percentage has slipped until the present standard is less than 20 per cent tin and, in many cases, less than 18 per cent tin. Of course, this reduces the cost of the mixture very materially. It is doubtful if so great a proportion of lead in the coating leaves it hard enough for our climate, but however that may be, I am very sure that what the master tinner saves in his price per box is lost under the soldering iron of his workman, that is, if he insists on having all seams tight.

The coating should be so distributed over every sheet that all of the surface is evenly coated and, most important of all, that there should be no exposed parts to start the familiar pin hole. Given mate-



Of the managers of these new plants (nearly all of whom were imported) some knew the business and others said they knew it. These new mills seemed to pick on terne plates as their basis of production.

Previous to the establishment of the industry in this country, tin plate was known entirely by brands; never was anything heard of pounds of coating, etc., but brands established by the makers were used entirely. I can recall such names as Pontymister, Worcester, Dyffryn in terne plates, and Melyn and Calland in the charcoal brights, while Coakley K was well known among coke users.

As a boy I frequently saw the shop foreman preparing the work of a job of tin roofing. He went

for use which did not involve, possible leaky roofs, were packed along with the perfectly good.

Recently I have been told that plans are about complete for this program of advertising and that one of the points will be to urge the consumers to insist upon the use of the best materials.

A good tin roof is one of the best and the most practical forms of roof in this climate, but the adjective "good" is an essential part of the description. Any good plate or sheet of steel, if it is well enough annealed, so as to be soft and readily worked, will do for the base. The coating is the important thing. At the time the manufacture was begun in this country the coating was usually $33\frac{1}{3}$ per cent tin and $66\frac{2}{3}$

per cent lead. If the consumer is given material of this kind, put on by a competent and careful workman and properly protected by paint, there is no reason why a tin roof should not give most satisfactory results.

From the consumer's standpoint (and the consumer has a right to consideration) he is right in expecting you to use your knowledge and skill that he may be correctly informed; and you, if you do so correctly inform him, should make your charge for service on that basis, but the consumer is entitled to expect that you will use care with your expert knowledge to furnish him the best for his use. Do we meet that responsibility, if, in order to save a small price in material, we condemn him to a loss in use or wear and tear of 25 per cent or 30

per cent? As an example, you may charge \$100 for a job; probably at the extreme \$20 will cover materials used, while the greater portion of the \$80 will be made up of labor and the rest of it will be known as overhead and profit. Are you justified in saving not to exceed \$2 or 10 per cent of material cost when in order to do so you cause him to lose \$25 or \$30 in the shorter life of the material? It costs no more for labor on one than the other. Would it not be a good procedure for both if you were to charge him \$2 more and save him \$25 or \$30? Is it not a fair question if you would not be better off in the long run to furnish the better material at the same price?

I assert that when you use your expert knowledge for a customer's benefit, and use it properly, that in doing so you have performed a service for him, other than simply doing a job of work for him, you are entitled to make your charge on that basis.

I dare say there are many who have not given consideration to the item "Ready to serve." To be sure, you do not go into your business with an idea of philanthropy. You expect to make a living and more, and it is expected of you. But, do you take into consideration that you have a very considerable investment in tools, machinery, stock, etc., to be at the service of whoever may come and who may want that service only for a few minutes or hours out of perhaps several months or years?

Other changes have come upon us by reason of the recent war and these have been more sudden in their action. Wages, we probably

all of us have in mind, and always give due consideration, but how about overhead? Is there such a thing or not? If there is such a thing, how can you justify yourself when you do not take it into your calculations? If you have omitted your charge for overhead in order to beat a competitor out of a job, have you not played a worse joke on yourself than on him? He, at least, is as well off as before, while you are not.

Among other changes which the war brought upon us was a material increase in overhead. Anyone who fails to recognize that fact and tries to figure his work on the same basis of overhead as before the war is not only doing an injury to his com-

petitor, but a much greater one to himself.

I am sorry to say that during the course of my business life I have known many who have omitted overhead on one pretext or another so that they might fool themselves into taking jobs that they would better have let someone else have.

Let me counsel all of my hearers to go over this overhead carefully and find out to what extent it has grown in the last ten years. If all would give heed to this great fact and if everyone would put into practice the advice given here, it would add greatly to the prosperity of all and would be, on the part of some, another change with the result that all would prosper.

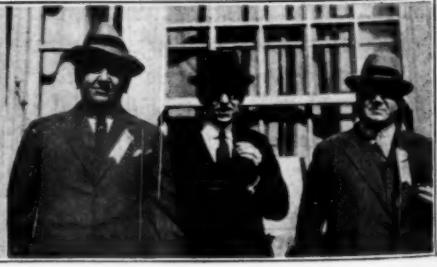
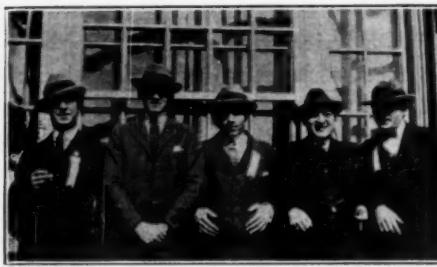
Secretary Sloan Outlines Benefits Derived From Copper and Brass Research Effort.

Discourses On Greatly Increased Use of Copper for Roofing Purposes, and Briefly on How to Lay a Roof.

IN the following address by George A. Sloan, Secretary of the Copper & Brass Research Association, delivered before the members of the Illinois Sheet Metal Contractors' Association in convention at Peoria, Illinois, April 9 and 10, 1924, Secretary Sloan has set down in an interesting and concise manner a few of the many benefits which the sheet metal contractor and the industry derive from the Copper & Brass Research Association.

The work of the Copper & Brass Research Association is twofold. With a highly trained technical staff, it is constantly studying and improving, wherever possible, the ap-

plication and uses of its metals, maintaining at the same time an information bureau to solve the countless technical problems referred to it; on the other hand, with an equally efficient publicity staff, it is gradually and surely arousing public interest and confidence in the durability and permanency of copper, brass and bronze. In just so many ways the Copper & Brass Research Association has been assisting and will continue to do more for the sheet metal contractors of this country. I should add that the association's value to you is fundamental, in that it stands back of the product of one of America's greatest indus-



(1) R. B. Strong, Homer Furnace Company; Wm. P. Laffin, Tuttle and Bailey Manufacturing Company; Jack Stowell, Aurora; Fred Bloomfield, Manny Heating Supply Company; John J. Sheets; (2) F. E. Mehrings and Roy C. Walker, The Meyer Furnace Company; (3) Chas. N. Louis, Peoria; Oliver T. Ingledew, Scully Steel and Iron Company; Rudolph J. Jobst, Peoria.

When it comes to making a choice of materials for roofing and flashings, gutters and downspouts, the sheet metal man is the best and usually the final judge as to what metal is most suited to a particular job. Metals have clearly defined characteristics; there are sprinters that last and look well for short periods of time, but where duration is required, stamina is what counts.

If you will permit the use of a term common to automobile owners, I would say that home builders are looking for more mileage in building material. With the irresistible logic of figures, the automobile owner naturally came to realize the economy of cord tires, especially as with that economy he bought freedom from bother and repairs and more enjoyment in motoring. The home owner wants cord tire service from his roof, his valley flashings and leaders.

Copper Most Economical and Decorative.

Experience shows that copper gives the most economical mileage, and the public is instinctively believing more and more in copper, a metal that has been recognized throughout the centuries for its ability to withstand the elements. I need only refer you to Old Trinity church, New York, which was covered with its present copper roof in 1846, repair costs over that long period being negligible. Then there is Christ church, Philadelphia, which is protected today with a copper roof that was laid before the American Revolution in the year 1749. Countless other instances are on our files showing that architects have specified copper roofs.

When it comes to appearance, copper has a decided advantage over other metals in that it contains in itself all the requirements of decoration. Left alone, it gradually weathers to a soft green tone, or with the use of oil it will acquire that dull bronze color found only in copper. In the form of shingles,



George A. Sloan,
Secretary Copper & Brass
Research Association

which are rapidly coming into favor, various effects in texture and color can be obtained; in fact, the copper shingle combines, as no other roofing material does, utility, reasonable cost and beauty. These are made from hard rolled copper sheets in a variety of sizes and designs. The method of application is simple. They are secured to the roof sheathing by copper nails at the top. Each shingle laps over the adjoining ones in such manner as to form a watertight joint. No soldering is required. No allowance for expansion is necessary, as the form of the

shingle provides ample room for movement. Copper shingles can be laid equally well on new roofs and over old shingled roofs. Because of their raised butt construction, they are slightly elevated, thus providing an air space between the shingle and the roof sheathing, allowing ample ventilation with consequent coolness in summer.

The following then is a summing up of the reasons favoring copper for roofing purposes: It is the most durable sheet metal; one of the lightest of roofing materials; one of the cheapest of high-grade roofings; free from up-keep expense; the most beautiful of metallic roofings.

Observance of Primary Applying Requisites.

There are a few fundamental requisites in applying a sheet copper roof, the observance of which cannot be over-emphasized. Consideration should first be given to the thickness of the metal. As copper does not corrode, there is no question of durability in the thinner gauges. However, there must be considered the matter of extraneous damage. The use of copper sheet weighing one pound per square foot, commonly known as 16-ounce copper, overcomes this obstacle and is consistent with good practice.

For all types of roof use soft (roofing temper) copper sheets only, as soft copper will give the most satisfactory results. Hard (cornice temper) sheets, though sometimes used, are not recommended. The soft sheet is, as you will understand, more easily workable, especially for flashings where bends, etc., are necessary.



(1) Thos. W. Cox, Haynes-Langenberg Manufacturing Company; R. E. Mackey, Stockhoff Supply Company; W. H. Symonds, Symonds Register Company; Julius Gerock, Jr., Gerock Brothers Manufacturing Company; (2) Conventionites lining up for the Automobile ride; (3) E. B. Langenberg, Haynes-Langenberg Manufacturing Company; W. H. Margenau, Arthur F. Wiechert, St. Clair Foundry and Furnace Corporation, George Harms, F. Meyer & Brother Company.

Never drive a nail through a copper sheet. Always secure the copper sheet in position by means of copper cleats, the cleats only being nailed to the roofing boards, the battens or wood ribs. Never use nails of iron or steel to fasten copper at any place or under any circumstances.

If possible, never use copper in contact with another metal, but if the plan of construction requires the use of iron or steel, by all means see that the iron or steel device is heavily tinned or that sheet lead is inserted between the copper and the other metal. This will prevent galvanic action and prevents deterioration of the iron or steel. The use of brass devices is recommended, which eliminates tinning.

Nails holding the roofing boards in position should be well set before the copper is applied.

The temperature at the time the work is done must be taken into consideration by the contractor in allowing for expansion and contraction. A roof laid in July needs little room for expansion as it is being laid in a high temperature. It does, however, require ample provision for the contraction which comes with cold weather.

For the sheet metal contractor and architect we prepared and distributed last year 10,000 copies of a copper roofing manual. During the past year and a half our Research department has been engaged in the preparation of a comprehensive copper flashing handbook, the first ever compiled, 15,000 copies of which, representing the first edition, are just off the press and are now available to you. This hand-

book has been subjected to the searching criticism of leading architectural and building construction authorities, including Professor Thomas Nolan, F. A. I. A., Editor in Chief of the well known Architects & Builders' Handbook.

In a less technical vein and for the information of home builders, we distributed 100,000 copies of a booklet "Copper—The Ideal Roof" in 1923 and a similar number of a booklet "How to Build a Better Home." Our advertising appeared in sixty-eight different magazines, in addition to which we blanketed the country with newspapers having a total circulation of 109,502,000. Then too we released approximately one hundred articles of both a general and technical nature for national magazines and trade publications. The splendid coöperation in turn on your part has been all that could be desired.

Sheet Metal Contractors of Milwaukee Hold Monthly Meeting.

Seventeen members were present at the regular monthly meeting of the Master Sheet Metal Contractors' Association of Milwaukee, Wisconsin, held at Milwaukee, April 2nd

The meeting was called to order by President John Millen, who called for the reading of the minutes of the last meeting by Secretary T. E. Tonnen.

The minutes were read and approved, and the delegate to the Employers' Council was called upon to make his report, which he then did.

The acceptance to membership of the Midwest Ventilating Works was

brought before the assembly and allowed.

Treasurer William Gallum reported on moneys collected for dues and the numerous disbursements made in payment of authorized expenditures incidental to the conduct of the Association's affairs. The report also included the balance in the treasury.

These routine affairs were quickly despatched, leaving the remainder of the evening entirely free for friendly discussion of matters of policy.

Notes and Queries

Tinning.

From G. T. Mueller and Son, Columbus, Wisconsin.

We are making a steel mixing spoon which we want to tin plate. Will you kindly furnish us with the name of a concern who supplies equipment for this work?

Ans.—Callender Soldering Process Company, 12 South Jefferson Street, Chicago, Illinois.

Roofing Tin and Furnace Tin.

From Panhandle Sheet Metal Works, Amarillo, Texas.

Kindly give us the names and addresses of firms from whom we can buy furnace tin and roofing tin.

Ans.—Merchant and Evans Company, 347 North Sheldon Street, Chicago, Illinois; N. and G. Taylor Company, Philadelphia, Pennsylvania; Berger Manufacturing Company, Canton, Ohio; Milwaukee Corrugating Company, Milwaukee, Wisconsin; W. J. Burton Company, Detroit, Michigan, and Berger Brothers Company, 237 Arch Street, Philadelphia, Pennsylvania.



(1) G. J. George, Springfield; James Barrett, Alton; A. J. Hermsdorfer, Quincy; (2) O. B. Suck, J. H. Heimbuecher Metals Company; Geo. A. Sloan, Copper and Brass Research Association; Harry Butler, Bloomington; W. S. Houston, Dallas Brass & Copper Company; James Conner, Peoria; (3) Phillip D. Evans, Walter G. Clark, Incorporated; A. Ziener, Quincy; G. Scheipering, Quincy.

American Hardware Manufacturers and Southern Jobbers Hold Successful Meeting at New Orleans.

**Large Attendance Marks Convention in Southern City
—Group Session Meeting Show Good Business Trend.**

THE city of New Orleans, Louisiana, is one of the oldest in the country, with perhaps a few exceptions in New England or along the Atlantic coast. It was a flourishing city long before that great strip of territory known as the Louisiana purchase was purchased from the French by the United States in 1803 under the Presidency of Thomas Jefferson.

This quaint old French city with its hundreds of places of historical interest has not been left behind in the grand march of progress. With its 390,000 population it still forms one of the most important gateways for the ingress and egress of southern goods. Then, too, with the deepening of the Illinois waterway its importance will be still further increased.

The selection of New Orleans as a convention city by American Manufacturers and the Southern Hardware Jobbers' Association, April 8 to 11, 1924, was indeed a display of the extraordinary good judgment of the Association officers in charge of the selection of a convention city.

As New Orleans is a leader in the southern commercial world, so also is she one of the foremost in the distribution of that far-famed southern hospitality. As a hostess she is superb. Such is the opinion of the hardware men and women who attended the convention held in the Hotel Roosevelt, April 8 to 11.

President G. A. Trumbull, of the Southern Hardware Jobbers' Association, opened the Tuesday morning session, at which time the invocation by Rev. Dr. Alexander and the singing of "America" were consummated.

W. M. Pitkin then addressed the convention and explained the program changes.

President Trumbull then introduced Colonel William Pfaff of the

Chamber of Commerce of New Orleans, who welcomed the Association members to New Orleans.

President Trumbull made his annual address, which contained an outline of the work which that fine old organization has been doing and the recommendations for the coming year.

Address of President Trumbull.

I am sure I express the sentiment of all the members of our associa-

May I be permitted to say that in my opinion there never has been a time in the history of our organization when there was a greater spirit of coöperation and good will in the hearts and minds of the jobbers and manufacturers than at the present; consequently, it is my judgment that this meeting—which is the thirty-fourth annual meeting of our association—will be productive of more than usual good results.

It has been said that the jobbers need to be educated along certain lines, looking to the more efficient distribution of merchandise, and I am quite sure that the manufacturers are in a position to do some real constructive work in this direction, if the jobbers will assume the attitude of willingness to be taught.

Right in this connection, I want to suggest that the jobbing business of 1923 was not satisfactory, in my opinion, to a majority of our members.

Briefly, let me bring you a little picture that I think will illustrate my meaning:

In the first place, the jobber has been characterized as a stabilizer, by reason of the position he occupies, which is midway between the source of supply (the manufacturer), and the man who ultimately distributes the merchandise to the consumer or user (dealer). If he functions properly he is in close contact with the manufacturer, his knowledge of the market should enable him to go far enough into the future to acquire adequate stocks of merchandise to take intelligent care of the needs of the dealers in his territory at all normal times and seasons. He knows at least the potential needs of his territory on any given commodity other than the small miscellaneous articles that go to make up the stock of any well ordered dealer. He should adhere strictly to suggested

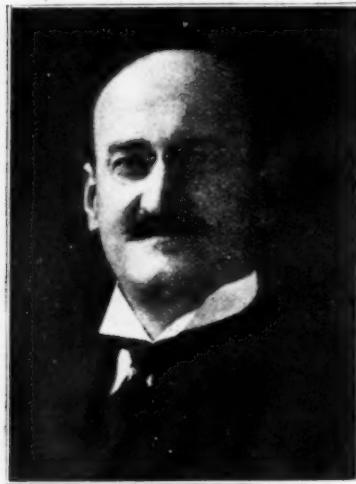


**Isaac Black,
President American Hardware
Manufacturer's Association.**

tion when I say it is gratifying to us to have the manufacturers with us at this time.

While you are men of large affairs, you have seen your way clear to close your desks, take off your working clothes and travel a long distance to come down here to rub shoulders with and look into the faces of the men who distribute your products in the South land. You have done this too without any view of barter or trade, simply to express your feeling of good fellowship and co-operation, and to discuss with us our problems and to get from us our viewpoint on matters of general import.

resale prices made by the manufacturers. He also should refrain from taking on every new device or appliance that comes to him in the hands of a salesman—himself already sold



Samuel D. Latty,
Vice-President American Hard-
ware Manufacturers
Association

on the proposition, without having first thoroughly investigated its real merit and demonstrated to himself that there is an actual demand for the article already created.

In the second place, let us turn the picture about and view it from another angle, or with a different shade of light, where I am characterizing the afore-mentioned gentleman as being a demoralizer. I am making the assertion that on nearly all the suggested resale prices made by the different manufacturers, it was the custom during 1923 for the jobber to practically ignore the policy outlined by the manufacturer, for one reason or another—hearsay and rumor, unnecessary cost of doing business was lost sight of. The truth of the matter is, what one did not do the other did, so that when we come to the final analysis, it is clearly demonstrated that everyone had participated in this demoralizing method of distributing stable merchandise, which brought about the final result afore-mentioned. I am sure no manufacturer wants his product cheapened either by his distributor's methods or by innuendo, nor does he stand for his integrity being assailed by reason of his dealings with the other fellow.

This brings us to my original expressed subject, that of education, and I leave it with you.

A few manufacturers have already announced the opening of a little educational program. May we foster the hope that more of you will fall in line and make some tangible effort to hold up the fallen, to comfort the dying, and to assist the weak-kneed and faint of heart.

1924—What of its probabilities?

Figures given out a few days ago by the federal reserve board from four reporting districts indicate that sales of hardware for the months of January and February showed a slight gain over the same period of 1923. They also showed a gain in February over January, and an increase in stocks on hand for same period, together with a growth in volume in outstandings.

This, in a general way, should be encouraging, in view of the fact that one of the reporting districts is Dallas, and Dallas is in what might be considered the center of a territory where extreme bad weather prevailed almost throughout the entire first quarter of the year. We may well assume what might have been done under normal weather conditions would have increased the gain materially. Farm work has been retarded—in fact, the farmers have been kept out of their fields up to this time, and the planting season will necessarily be very late. This situation may be rather discouraging to the raisers of spring grains, but my observation during a period of over 40 years in the black land belt of Texas has been that a wet cold winter and spring has usually been followed by a dry summer and a good cotton crop. So I am not pessimistic over the agricultural situation—at least in the cotton belt.

Building permits from reporting districts show a greater volume so far than in 1923. I regret to say, however, that there has been and there is still a marked dearth of building in the rural districts; that is, in the smaller cities and towns, and on the farms, where housing conditions in many localities are not good, and where building improve-

ments are badly needed.

In this respect, a paradoxical situation seems to exist.

In the corn belt, where is grown the greater part of the food that is consumed in our country, a bushel of wheat will buy much less hardware than for a number of years. This is also true of 100 pounds of pork or 100 pounds of beef on foot. This may account for slack building operations in these environments.

On the other hand, a bale of cotton in the cotton belt will purchase more hardware than for a number of years, but the farmer is not directing his efforts along building lines. Why, I cannot say, unless his inclination is drawn more to luxuries, such as automobiles, etc., rather than to the improving of his living conditions.

Or it may be for the reason there



William A. Graham,
Vice-President American
Hardware Manufacturers'
Association.

exists a well defined sentiment in the minds of the buying public, at least outside of the larger cities, that merchandise of all kinds is too high.

On the whole, however, we have much to be thankful for. Let us look to the future with confidence and with determination to excel all past efforts.

People everywhere are clamoring for a reduction in taxes, which has become burdensome, and growing more so as time goes on.

Members of both political parties

are making much noise in this particular, and in telling the people how to redeem the country; neither, however, willing to concede anything or to believe any good thing can come out of Nazareth. While we and men of like character are standing supinely by with a degree of apathy that is extremely tragical.

Seemingly, we are not interested in what takes place, and just so long as we continue in our present attitude toward this most important phase of our state and national life, just so much easier are we making it for the unscrupulous in the realm of government to prosper in their nefarious course.

Meanwhile the brain and brawn of our country continue to pay the bills, some of which are the Federal Tax, the Capital Stock Tax, the State Tax, the Income Tax, the Municipal Tax, the Occupation Tax, the Exercise Tax, the Franchise Tax and the "Yellow Tax."

President Isaac Black, of the American Hardware Manufacturers' Association, followed President Trumbull with his annual address, which is as follows:

Address President Isaac Black.

The joint meeting of the American Hardware Manufacturers' Association and the Southern Jobbers' Association has progressed another step, not only in the cementing of those pleasant relationships that have existed for a good many years, but also along real progressive and beneficial lines to the industry that we are both engaged in.

Instead of two separate programs, we have merged into one program the activities of this convention in the discussion of problems that enter into the every day handling of commodities we carry, both from the standpoint of jobber and manufacturer.

Manufacturers exist only by reason of consumer demand. They organize their business to supply the demand by manufacturing and selling departments, not only those in our own plant, but also as a direct channel of distribution through the jobber and retailer, who, in turn, reach the ultimate consumer.

Manufacturers of standard lines and known reputation, through the character and standard of their products, have proved their position on the class of merchandise they manufacture to the ultimate consumer. Therefore, in many if not most cases the selling or merchandising departments of our businesses are the most important.

On account of the large variety of goods in the hardware industry, and the necessity for discussion pertaining to group lines usually handled under separate departments in jobbing houses, it has been found most advantageous to bring about



**Frederick D. Mitchell,
Secretary-Treasurer American
Hardware Manufacturers'
Association.**

the group meeting plan of discussion, which assures more intelligent consideration than is possible under the open meeting plan, and which group plan has been adopted jointly by our two associations for this convention.

This we feel will give greater interest and be more constructive, as each group of necessity will be composed of those having similar manufacturing and distributing problems, thereby insuring a manufacturer's interest in his product until it is in the hands of the ultimate consumer.

The joint convention group sessions as outlined in our program are but an incidental feature of the

group plan, inasmuch as the groups as organized function continuously throughout the year, and they quickly become representative of industry, rather than of personal interest. The manufacturer has retailer and consumer problems to consider, as well as those of the wholesalers, and his attitude toward all branches of the industry must of necessity be consistent and equitable.

The immense amount of work accomplished for standardization and simplification in hardware, and common sense practices, has largely been made possible through the group plan of conference, instead of grouping the industry as a whole, and affords great possibilities along these lines for the future.

Much time and thought have been given to the subjects under discussion by the group chairmen in conference with jobbers, taking under discussion those subjects that will be of greatest interest to the industry as a whole, and our joint printed program indicates the interwoven interest, and the topics to be brought up for discussion at this convention by members of both associations.

I am sure that the new plan adopted for this year's convention will find favor not only in this joint association session, but in any other association sessions in which manufacturers participate, which is bound to bring about real constructive results in our industry.

Following the address of President Black Colonel Peter O. Knight, General Counsel, Southern Hardware Jobbers, spoke extensively on "There is one mistake that we must not make."

Excerpts of Colonel Knight's address will appear in later issues of *AMERICAN ARTISAN*.

There were also the addresses of representatives of the National Hardware Association, the Texas Hardware Jobbers' Association, the Southern Supply & Machinery Dealers' Association, and National Retail Hardware Association.

President Trumbull then introduced F. A. Heitmann, who addressed the convention on behalf of the Jobbers' Association.

Mr. Heitmann said: "Mr. President, ladies and gentlemen and members of the Southern Hardware Jobbers' Association and the American Hardware Manufacturers' Association and friends, I am delighted to be here with you as usual and especially on this occasion, representing the National Hardware Association at this meeting.

"We have before us the question, what is necessary for us to do in order to maintain our position, that we have maintained heretofore as American citizens and business people. But my friends the time has come that business men must be politicians. We must make democracy safe for our business and capital (applause). There must be an equalization of taxation. It must be as fair as possible, and no fairer. The politician must learn that the time has come for him to take notice of the distributors of merchandise and consider their interest.

"If the industries and commerce of this country do not get together and make democracy safe for business, then there will be no business. You talk about mileage on the railroads. That was done pre-war. Since that time there has been nothing but sidings built and few of them. There is reason for it. Capital feels that it is not safe in railroads, that is why. Capital is not safe in many other lines of pursuit. Capital is going into other lines of business and other securities, and that is going to continue—do not try to kid yourself—it is an every day proposition.

"I tell you, gentlemen, so long as Washington is organized as it is today you will have no revenue in business to any great extent. You can talk about natural resources as much as you please, but if it is going to take everything it is worth to develop them they will not be developed. So long as there is a big preponderance of people in this country who are not contributing to the taxes of this country you will see no general revival, they must have a respect for the Constitution of the United States, and they can-

not have it so long as they do not pay taxes."

The joint meeting of the Associations was adjourned, each Association to meet in executive session in the afternoon.

Tuesday afternoon a separate executive session of the Southern Hardware Jobbers' Association was held in the Green Room of the Roosevelt Hotel.

The executive session of the American Hardware Manufacturers was held in the Du Barry Room of the Roosevelt Hotel at the same time.



Mark Lyons,
First Vice-President Southern
Hardware Jobbers'
Association.

A recess was then taken to the adjoining hall where the joint association was addressed by P. D. Noyes, former U. S. Rhineland, commissioner and former president of American Hardware Manufacturers' Association. These remarks will be in a later issue of AMERICAN ARTISAN.

After the close of Mr. Noyes' address the Jobbers' Association continued their executive session and considered further the recommendations contained in the report of the executive committee.

The following special committees were appointed by President Trumbull:

COMMITTEE ON NOMINATIONS:
C. H. Ireland, C. G. Wright, F. E. Pharr.

COMMITTEE ON RESOLUTIONS:
L. M. Stratton, B. J. Schuster, W. A. Cortes.

AUDITING COMMITTEE: Mark Lyon, W. C. Thomas, George E. King.

The association then adjourned to meet the next morning, Wednesday, April 9, in joint session with the American Hardware Manufacturers' Association.

In the evening an informal reception was held at the Roosevelt Hotel, Du Barry Room.

There were several convention sessions on Wednesday morning and afternoon and Thursday morning in Convention Hall.

The Agricultural Implement Group meeting was held Wednesday morning. And the topics discussed were: The value of progress of simplification. Is decimal pricing and packing economical? What conditions, if any, justify cancellations?

This meeting was well attended. This was conducted as a joint meeting and W. A. Graham was Chairman.

The second joint group meeting concerned itself with tools and was conducted under the able tutelage of Chairman J. E. Stone. The topics brought up for discussion were those concerning themselves with the soundness of the policy of guaranteeing of goods. Sales promotion through the manufacturers' missionaries was also given considerable attention at this meeting.

The first meeting of the afternoon session Wednesday was in connection with the builders' hardware group, and this meeting was conducted under the able guidance of Murray Sargent, Chairman. The general business situation as it is seen by experienced forecasters for the next six months was discussed. The general attitude was that business was good, but some men felt that politics may cut a considerable figure. The building outlook is very promising, as the builders have not yet caught up on their programs. The advisability of requiring that all hardware jobbers be technically equipped to bid on blue print jobs

created a great deal of discussion and some able arguments were brought forth on both sides of the question. "Does any trade condition justify a non-observance of cash discount terms?" was also a question which occupied the time and attention of the members in attendance for the remainder of the time allotted to this session.

The mill supplies group meeting came next. This was also a joint meeting and N. A. Gladding was the Chairman. The desirability of having price guarantees in the mill supply industry from an economic standpoint was thoroughly discussed. Then the resale prices came in for their share of the discussion, and in this connection the viewpoints of the manufacturer, the jobber and the dealer and consumer were taken into consideration. As was to have been expected, the discussion of the circumstances under which the manufacturer should pay the freight bill occasioned some lively but friendly argument.

In the afternoon a card party was held at the Patio Royal in the old French quarter for the ladies, while the evening's entertainment consisted of a theater party at the Strand theatre, Baronne and Gravier Streets, for a gala event.

Just now, when the desirability of eliminating the jobber has come into so much prominence, any discussion of the effect of direct shipments on the manufacturer and on the distribution system now in vogue would be very interesting, and such it actually proved to be at the Thursday morning session of the housefurnishings group, which held its meeting under the officiation of C. W. Asbury, Chairman. The probability that the jobber and dealer stocks were too low to render the consumer proper service was given a thorough discussion at the meeting also, and a great deal was accomplished in the way of clearing up many difficulties and misunderstandings.

"How may the manufacturer develop an increased market for sporting goods?" was the first question brought up before the sporting goods

group at the second Thursday morning meeting, of which C. W. Asbury was the Chairman. At this meeting also the question of how the manufacturer can help the jobber in reducing the carry-over of seasonable goods was brought out. Suggestions were made to stir up interest from the health point of view.

Thursday afternoon there was a special joint meeting of the three associations, and Thomas Parnell, representing the Old Guard, publicly thanked C. E. Ireland for his tribute



John Donnan,
Secretary-Treasurer Southern
Hardware Jobbers' Association.

at Jacksonville to the Old Guard dead and eulogized departed members.

Resolutions were unanimously passed by manufacturers, jobbers and Old Guard to send telegrams to Irby Bennett and Henry H. Beers expressing greetings, good cheer and love, with regret at their inability to be present at the convention.

Thursday afternoon separate executive sessions of the members of the two associations in convention were held. The jobbers held their meeting in the Green Room of the Roosevelt Hotel, while the manufacturers held their meeting in the Du Barry Room on the mezzanine floor.

Friday morning an executive session of the members of the Southern Hardware Jobbers' Association was held in the Green Room of the Roosevelt Hotel.

Resolutions were passed thanking the hotel management, city officials and those in charge of entertainment features, which contributed to success of convention.

Expressions of regret were voted on death of F. R. Simpson, J. D. Sproul, W. A. Chénowith.

The election of officers for the Southern Hardware Jobbers' Association were as follows:

President—G. A. Trumbull, re-elected.

First Vice President—Mark Lyons, re-elected.

Second Vice President—Walter C. Thomas.

Secretary-Treasurer—John Donnan, re-elected.

John L. Keith and L. M. Stratton were elected to the Executive Committee.

Dallas, Texas, was unanimously selected as the convention city for next year.

Two Emotional Appeals That Have Strong Pulling Power.

It is well known that there are definite emotional appeals that have a strong pulling power for distinct groups.

Women may be roughly divided into two distinct groups. First, those whose thought is centered in emotional appeals that grow directly out of family and home interests. The home interest embraces all the activities that aim at the well being of the members of the home and all the things with which these activities are concerned. Today it is not unusual to find electric appliances being advertised as suitable gifts to women on Valentine's day, Mother's day and similar occasions.

Secondly, again there are women whose interests are distinctly social. This gives rise to the ambition to be esteemed and reckoned with by one's fellows. For example, a new fashion is taken up as a means of securing social recognition. The emotional appeals having the strongest influence over this class of women are social.

Old Guard Southern Hardware Salesmen Hold Well Attended Meeting at New Orleans.

Roosevelt Hotel Scene of Many Renewed Friendships — Joseph H. Grubb Elected President.

IT IS a pleasure indeed for a man to realize that he has "come to himself." Some men come to themselves with one spurt; for others the transformation is gradual and imperceptible. Some men come to appreciate early in life that the mere acquisition of material wealth alone, measured in dollars and cents, does not bring them the satisfaction



Fred Huggins,
Retiring President Old Guard
Southern Hardware Salesmen.

desired from life. Others learn late in life that the spirit of benevolence and that only can bring them permanent happiness.

Emulating the Christ has brought men a far greater return in satisfaction and happiness than the acquiring of material wealth.

Whenever we see happiness and tranquility of mind in old age, we know that the object of our vision has lived and passed first through the period of experimental adolescence and then on to the full bloom of manhood and usefulness, and is now gliding slowly toward the twilight with a full realization of having attained the greatest thing in life—the acquaintance of that most desirable of all possessions—a true spirit of brotherly love.

How happy it makes us all feel to learn of the meeting once more of that grand old body of men comprising the Old Guard Southern Hardware Salesmen's Association at the Roosevelt Hotel, New Orleans, this week. It makes us glad, but reflective as well; for we realize that some of those venerable gentlemen who attended the last meeting have passed to the great beyond, but such was the conduct of their lives that their spirits live on in memory.

The Old Guard meeting was held Wednesday, April 9, and it was exceptionally well attended.

President Fred Huggins read his annual address, which was as follows:

Address of President Fred M. Huggins of Old Guard.

Once more, do those of us who have had the good fortune to be able to come, gather together for an exchange of greetings, and for taking such measures as will aid in the furtherance of the principles of our organization; but, most of all, to re-pledge ourselves to keep the faith, for the one thing we acclaim, with deepest pride, is, that when we banded together, years ago, our foundation was wrought with brotherly love, and we have striven to build our edifice, stone upon stone with kindness, co-operation, helpfulness and fair play.

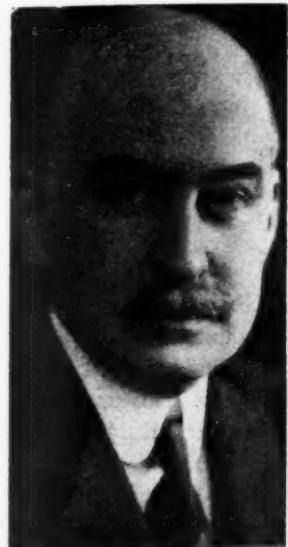
As we have grown from a little group to our full membership of one hundred, some have dropped out, but only because they have gone before. These we stop to bless and revere. The last two, Bill Chencweth and Charlie Woodburn, passed along since our last convention. Both, were dear friends, God bless them.

I wish to express the appreciation of our members of the good services of our worthy secretary-treasurer and his assistant. There is more

work connected with this office than most of us realize, and I am sure we should all make an effort to make it as easy as possible for them.

I know I voice the feeling of all our members in expressing our appreciation of the continued courtesy extended to us by the AMERICAN ARTISAN, whose fair manager, Miss Etta Cohn, has continued the policy of her predecessor, Dan Stern, our earliest and strongest supporter, and not only sends our membership the good weekly magazine, but on every occasion has helped along the cause of the Old Guard.

I believe it well to explain something in regard to the method of electing a new member when a va-



Joseph H. Grubb,
Elected President Old
Guard Southern Hard-
ware Salesmen.

cancy occurs. Under our constitution the advisory board has this burden to shoulder. Sometimes it may seem that these gentlemen are too careful and painstaking, but if the candidate is eligible, it is only a temporary delay. If he has won the right to become an Old Guard, rest assured he will be.

In the past we have struck some snags, our ship has rocked, but I am convinced the spirit of the Old Guard is as strong as ever, and as long as this spirit exists the Old Guard will live and prosper.

The Secretary, R. P. Boyd, also made his report for the year, which

showed the Association's affairs to be in good condition.

Annual Report of Secretary R. P. Boyd, New Orleans, Louisiana, April 9, 1924.

The Old Guards' Southern Hardware Salesmen's Association has become a recognized factor in the hardware trade. This is particularly true of the Southern jobbers, with whom it affiliates. Through the connection of its members with the manufacturers its influence is known and felt all over this broad land of ours.

Printing and distributing the address of Mr. Ireland, delivered at our last meeting. Extra copies were called for by many of our friends; some of the jobbers had supplied them to all their salesmen and one manufacturer issued 2,000 copies to his distributors.

In the death of two of our charter members which occurred during the year we are deeply grieved. William A. Chenoweth of Philadelphia and Clark K. Woodburn of

of Mr. Rush Simpson of Wimberly & Thomas Hardware Company, Birmingham, Alabama, we lost a true and loyal friend.

The following new members have been elected: Tillman Cavert,



A. R. Sisson,
Elected First Vice-President Old Guard Southern Hardware Salesmen.

Stahlman Building, Nashville, Tennessee, of Cavert, Miller & Lipscomb; William Thomas Bailey, Chattanooga Implement & Manufacturing Company, Chattanooga, Tennessee; John J. Gilmore, of American Steel & Wire Company, Brown-Marks Building, Birmingham, Alabama; Thomas O. Parker, of Enterprise Manufacturing Company, Philadelphia, Pennsylvania.

All obligations of the association have been promptly met and the reserve being retained up to the constitutional limitation.

Miss Etta Cohn, Manager of AMERICAN ARTISAN AND HARDWARE RECORD, who attended the convention, was presented with a beautiful bouquet of flowers.

A committee, made up of F. Herbert Smith and E. J. Newey, was appointed to purchase a radio set, which is to be sent to Charles C. Forsyth, who is now in the West Indies.

Four new members were accepted to the Old Guard, making the membership of the organization complete.



R. P. Boyd,
Re-elected Secretary-Treasurer Old Guard Southern Hardware Salesmen.

Canajoharie, N. Y., were members greatly beloved and whose loss is sorely felt.

President Huggins has approved the memorials for John K. Wilson and William K. Stone. In the death

The officers of the Old Guard were elected as follows:

President—Joseph H. Grubb.

First Vice-President—A. R. Sisson.

Second Vice-President—John J. Mopp.

Secretary-Treasurer—R. P. Boyd, reelected.

The Executive Committee was rearranged as follows:

F. Herbert Smith, Chairman; N. A. Gladding, H. A. Dean, James T. Skelly, George H. Hillman and William A. Corry.

When You Move, Send Word to Uncle Sam, P. M.

The moving season is again with us. More than 600,000 changes of address were filed with the Chicago post office during the year just past, according to a statement issued by Postmaster Arthur C. Lueder, but there were many thousands who moved and did not file a change of address with the post office with the result that many pieces of first-class mail and parcel post remained undelivered, and great quantities of circular matter and newspapers were destroyed.

If you move, notify both the post office and our office, giving the old and new address in both cases. Do this promptly, so that you may continue to receive AMERICAN ARTISAN without interruption or delay.

The postal regulations do not permit of forwarding any mail except such as carries first class postage, so that it is necessary that you notify us in order that we may change your address on our subscription records and mailing lists.

Who Makes "Swift" Fly Swatter?

To AMERICAN ARTISAN:

Will you please let us know where we can get the "Swift" fly swatter?

Yours very truly,
ASEMISSEN AND KLINGER,
——, South Dakota.

Dollar Day Sale Window Display Stimulates Business for Ashland, Kentucky Store.

Thousands of Articles Moved Out Quickly by This Efficacious Method of Drawing Buyers to the Store.

HERE are few stores throughout the United States which have not or do not at some time during the year resort to a dollar day sale. It very often happens that the entire group of merchants in a small town will agree to have a dollar day sale on the same day, so that bargain hunters can buy to their hearts' content.

On such occasions the merchants agree upon the date considerable in

in the neighborhood of \$1 to warrant the expenditure, as they would be contributing to the advertising of the other merchants' business, to the detriment of their own. This, of course, would be a very narrow and short-sighted view of the matter and one which would put the merchant in disfavor with his colleagues.

Such a condition could never arise in a hardware store, as there

the word day was painted black.

The elevations in the window were covered with white bunting.

"Is That All?" Is the Poorest Conclusion to a Sale.

When a customer enters the store, you, as proprietor or clerk, go forward immediately to wait upon him. The desired article is found and a



Dollar Day Sale Window Display Arranged By Dan P. Hill for the Ogden Hardware Company, Winchester Avenue and Seventeenth Street, Ashland, Kentucky.

advance of the actual sale day, so as to give ample opportunity for it to become thoroughly known throughout the community. Then, too, when all merchants are in on the sale, they are able to give it much wider publicity, because they are able to put forth greater force.

Some merchants may object to this plan on the grounds that they do not have sufficient articles price

are hundreds upon hundreds of articles which could be priced at \$1.

The individual, however, need not wait for unified action, but can put on a sale of this sort on his own account, such as the one illustrated herewith. He will run a good chance of gaining many new customers for the store in this way.

The dollar sign was cut from wall board and painted red, while

sale made. Then you say, "Will that be all?" and he answers, "Yes." The incident is closed; you have rendered satisfactory service; but have you been one hundred per cent efficient as a salesman? Could you not have sold that person something additional without inducing him to buy something he did not need or which might prove a disappointment?

Store Arrangement of Primary Importance in Selling Seasonable Stock.

Economy of Space Must Be Figured to a Nicely in Order to Bring All Goods Into View.

IN preparation for the spring trade, the store interior should be to some extent rearranged, care being taken first to feature the most important spring lines, and second, to avoid overcrowding, which is fatal to successful display.

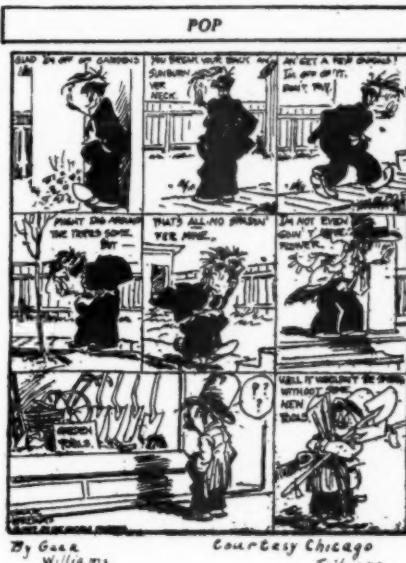
Undoubtedly the question of rearranging spring lines is a difficult one. Many a display has been spoiled by overcrowding; this, indeed, is the danger when the aim is to bring prominently forward all the lines suitable to the season. Crowded effects are to be avoided; the great problem is, how to bring spring lines to the front without overcrowding.

Much depends on the store itself, and something on the lines carried. Here is the usual arrangement of one store which handles the problem fairly well: On one side of the front door is the paint department and on the other are cases and shelves displaying builders' hardware. One window is given to a paint display; in another sporting goods are shown.

With this much space given to two staple lines, it may be asked, What can be done with the other goods which must be prominently displayed at this season? The answer is found in utilizing every display facility available. In a big city hardware store, for instance, a post or pillar stands about ten feet from the door, helping support the ceiling. This might be considered an unsightly obstacle, but it is made an asset. Around this post a glass case has been built to show samples of silverware. A customer might not see exactly what he wanted in this necessarily small selection, but he will see enough to interest him, and he can find more in a show case at the rear of the store.

Further back in this store is a silent salesman in which is arranged a fine display of sporting goods.

No attempt is made here to show more than samples. The main stock is kept at the back of the store. Behind this show case stands a circular radiator. That might seem to break the floor space, but it has been utilized as a stand. About this radiator are arranged metal and wire door mats. Everyone knows how these mats are needed in the spring; to show them is to sell them. Kerosene stoves are also ranged about this radiator. They occupy little space, but they give anyone passing



an idea of the stock carried. It is desirable to show these stoves at this season; ordinary heaters may be relegated somewhat to the background, but kerosene stoves are especially wanted in the spring and early summer months.

In another establishment a neat method has been adopted of displaying fishing poles. A stand has been built which permits of the rods being shown in the form of a pyramid. By this device not a square yard of floor space is occupied, yet the sportsman can see at a glance a score or more of the rods carried. He will be a hard man to please if he does not see something he likes.

Garden tools can occupy a great deal of space. Also, properly ar-

ranged, they can be shown with economy of floor room. A good method is to install a stand like that on which the fishing poles are arranged, but somewhat larger. Around this, spades, rakes, trowels, hose reels and such lines may be grouped, and the whole space occupied need not be great.

Motor boat and automobile accessories are lines which move particularly well at this season. In one store where a good sale of these was reported last year the manager placed upon his floor a stand shaped much like the old-fashioned stile which used to afford an easy means of getting over a fence. On the steps of this stile were arranged wheels, carburetors, spark plugs and a wide variety of marine hardware. Again the space occupied for a fairly comprehensive display was not great.

Baseball bats are a timely feature. In some stores little compartments are made along the counters, one line of bats being kept in each compartment. Not a great deal of space is taken up. Another method is to make a stand in stepladder form. Grooves in this enable the bats to be laid crosswise like so many steps. A glance will tell the purchaser just what is on display. He can pick up the bats, examine their grain and try their weight with little or no disarrangement, and the one selected can be quickly replaced from the main stock kept elsewhere.

Household goods can be shown on a series of tables, one built above another in terrace or pyramid style, enabling a wide variety of these lines to be displayed. Such a stand can be quickly put together by any ingenious clerk.

All the spring lines cannot possibly be brought to the front of the store, but they can be so placed that even those near the back will get their proper share of attention. The great thing is to make one display naturally lead a person on to the next, so that the customer is impelled to walk back to see what is shown.

Pass the buck, and you will soon pass out of the picture.

**You Will Have to Believe
in Your Product Before
Making Others Do So.**

You cannot sell a tin roof, warm air furnace, or any other piece of sheet metal work unless you believe in it. No man can sell high-grade materials unless he is first sold on their value. If he is not sold, the first objection on the cost floors him.

The reason for higher prices, even though justified, is not always apparent. To the casual observer, a \$100 roof looks very much like a roof of the same size that was bought next door for \$60. Unless the sheet metal contractor who offers the \$100 roof is sold on the value, how can he expect to get \$40 more for an article that was sold to the next door neighbor for \$40 less?

**Make Good in The Job You
Have, and in Time You
Will Have a Better Job.**

Sometimes we feel that we could do better at somebody else's task, but we should remember—everyone gets dissatisfied sometimes, but the right sort of a man will succeed anyway. So it is up to you and me to make good where we are, or to get out of this position and into another where we can justify our own belief in ourselves.

Statement of the Ownership, Management, Circulation, Etc., Required by the Act of Congress of August 24, 1912.

Of AMERICAN ARTISAN AND HARDWARE RECORD, published weekly at Chicago, Illinois, for April 1, 1924.

State of Illinois, County of Cook.—ss. Before me, a notary public in and for the state and county aforesaid, personally appeared Etta Cohn, who, having been duly sworn according to law, deposes and says that she is the business manager of the AMERICAN ARTISAN AND HARDWARE RECORD, and that the following is, to the best of her knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed hereinafter as follows:

1. That the names and addresses of the publisher, editor, managing editor and business managers are:

Publisher, Estate of Daniel Stern, 620 South Michigan Avenue, Chicago.

Editor, A. G. Pedersen, 620 South Michigan Avenue, Chicago.

Editor, George J. Duerr, 620 South Michigan Avenue, Chicago.

Business Manager, Etta Cohn, 620 South Michigan Avenue, Chicago.

2. That the owner is: (If the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation the name of the corporation and the names and addresses of the stockholders owning or holding one per cent or more of the total amount of stock should be given.)

Estate of Daniel Stern, Simon Westerfeld, trustee, 620 South Michigan Avenue, Chicago.

3. That the known bondholders, mortgagees and other security holders owning or holding one per cent or more of total amount of bonds, mortgages or other securities are: (If there are none, so state.)

There are none.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association or corporation has any interest direct or indirect in the said stock, bonds or other securities than as so stated by him.

ETTA COHN,
Business Manager.

Sworn to and subscribed before me this 5th day of April, 1924.
(SEAL) BERTHA COHN.
(My commission expires August, 1926.)

Coming Conventions

National Warm Air Heating and Ventilating Association Convention, Hotel Winton, Cleveland, Ohio, April 16 and 17, 1924. Allen W. Williams, 52 West Gay Street, Columbus, Ohio, Secretary.

Missouri Sheet Metal Contractors' Association, Baltimore Hotel, Kansas City, Missouri, April 22 and 23, 1924. John B. Fehlig, Secretary, 528 Delaware Street, Kansas City, Missouri.

Metal Branch of National Hardware Association, Bellevue-Stratford Hotel, Philadelphia, May 9 and 10, 1924. W. H. Donlevy, Chairman, Philadelphia, Pennsylvania.

Panhandle Hardware and Implement Association, Amarillo Hotel, Amarillo, Texas, May 12, 13 and 14, 1924. C. L. Thompson, Secretary and Treasurer, Canyon, Texas.

National Association of Stove Manufacturers, Hotel Astor, New York City, May 14 and 15, 1924. Allen W. Williams, Temporary Secretary, 52 West Gay Street, Columbus, Ohio.

Southeastern Retail Hardware and Implement Association, composed of Alabama, Florida, Georgia and Tennessee. Convention and Exhibition, Atlanta, Georgia, May 27, 28, 29, 1924. Walter Harlan, Secretary, 701 Grand Theater Building, Atlanta.

National Retail Hardware Association Congress, San Francisco, California, June 16, 17, 18 and 19, 1924. Herbert P. Sheets, Secretary, Indianapolis, Indiana.

Hardware Association of the Carolinas Convention, Wrightsville Beach, North Carolina, June 17, 18, 19, 1924. T. W. Dixon, Secretary - Treasurer, 717-718 Commercial Bank Building, Charlotte, North Carolina.

Convention National Association of Sheet Metal Contractors of the United States, Raleigh Hotel, 12th and Pennsylvania Avenue, N. W., Washington, D. C., June 17, 18, 19 and 20. Edwin L. Seabrook, Secretary, 608 Chestnut Street, Philadelphia.

Michigan Sheet Metal and Roofing Contractors' Outing to Quebec, July 19 to 26, 1924. Frank E. Ederle, Secretary, 1121 Franklin Street, S. E., Grand Rapids, Michigan.

Ohio Sheet Metal Contractors' Association, Southern Hotel, Columbus, Ohio, July 22 to 24, 1924. George F. Mooney, Secretary, 213 First National Bank Building, Columbus, Ohio.

Pennsylvania & Atlantic Seaboard Hardware Association Convention and Exhibition, February 16 to 20, 1925, at Philadelphia Commercial Museum. Sharon E. Jones, Secretary.

Retail Hardware Doings

Iowa.

Joseph F. Sindelar has purchased the hardware store of F. J. Smid at Cedar Rapids.

E. L. Mack has purchased sole interest in the Mack and Voight hardware stores at Fort Madison. In future these stores will be known as the Mack Hardware Stores.

The Charles Berglund Hardware store in Moline has been damaged by fire.

Young Hardware Company of Bellevue has purchased the Baungartner Hardware stock at Dubuque.

Louisiana.

In Haynesville, the Norton Hardware Company has been damaged by fire.

Michigan.

The hardware store at Portland which has been operated by W. B. Stocum for eight years has been sold to Laban Smith.

Mississippi.

The Sharkey Hardware Company of Greenville has been incorporated under the name of The Sharkey Hardware Company, Incorporated. Incorporators are: Howard Dyer, R. H. O'Neill and R. M. Hamble, all of Greenville.

Pennsylvania.

A new hardware concern has opened for business at 606 Braddock Avenue, Braddock. The firm name is the Strathern-Whitehead-Wilson Company.

South Dakota.

Opocensky and Jones have completed a deal whereby they became owners of the Ritter Building. The new firm plans to wreck the old frame building and put up a modern building, one story and full basement, which will be the new home for their hardware.

George M. Clark, Pioneer Stove Manufacturer, Passes Away at Ripe Old Age of 82 Years.

Identified with Chicago's Industrial Life for Nearly Sixty Years He Became a Leader in His Field.

GEORGE M. CLARK, the oldest manufacturer of gas and oil stoves in the United States, died on Saturday, April fifth, at the Evanston (Illinois) Hospital, at the age of 82 years and ten months, the immediate cause being a cold that developed into pneumonia very quickly.

Mr. Clark was born on a farm near Westminster, West Vermont. His father died when the boy was only four years old and George had to do a man's work on the farm from the time he was twelve years. In 1857 his family moved to Brattleboro, Vermont, and he was apprenticed to a general merchant five years.

In June, 1864, he came to Chicago and secured employment with the railroad equipment firm of Cressar, Adams & Company, remaining with the organization until 1885, becoming superintendent of the factory when they consolidated with Dane, Westlake & Company, under the name of the Adams & Westlake Manufacturing Company. It was here that he began making oil stoves in 1878.

In 1881 he formed a partnership with John McGregor Adams, of the same company, and while still in its employ, to manufacture Jewel gasoline stoves, he also made several thousand for the Adams & Westlake concern bearing the name of Monarch.

In 1885 Mr. Clark sold out his interest in the Adams & Westlake business and bought the interest of Mr. Adams in his own concern, then being known as George M. Clark & Company and devoted his entire time to making Jewel gasoline stoves.

In 1888 he began the manufacture of gas stoves, and at that time there was but one other maker of such stoves in the United States, a man by name of Goodwin in Philadelphia.

About 1900 the quality of gasoline became so poor that it was decided to change the construction of the gasoline burner to one adapted for the burning of kerosene, and very few gasoline stove have been made since.

When the American Stove Company was formed, in 1902, George M. Clark & Company became one of its "divisions," and for three years, 1908, 1909 and 1910, Mr. Clark served as its President. At his death he was Chairman of the Board of Directors.

Mr. Clark leaves a widow, Mrs. Elizabeth Clark, one daughter, Miss Alice Clark, and one son, Robert K. Clark, who last year succeeded him in the active management of the George M. Clark & Company Division.

Funeral services, which were attended by many of the prominent men in the stove business as well as by scores of personal friends of the family, were held Tuesday, April eighth, at the First Congregational Church, Evanston, Illinois, with burial at Rosehill Cemetery.

Thus went to his rest a man, rich in years, after a life of great usefulness and happiness, mourned by a loving family and a large circle of friends.

It was a privilege to know him and an honor to be counted among his associates. His life stands as a monument to loyalty and diligence. His memory is an inspiration to those who must begin at the bottom of the ladder, for he won his way to the top by his own efforts and by full-hearted application to the work that was given him to do.

Karr Range Company Changes From Partnership to Corporation.

Karr Range Company, Seventh and Harrison Streets, Belleville, Illinois, has been incorporated to manufacture and deal in all kinds of

ranges, by Adam, Katherine and Edward Karr.

The Karr enameled ranges have earned a high reputation for their fine finish, design and workmanship. The incorporation of this business will no doubt tend to further strengthen its position in the range field.

Some Stove Selling Hints That Have Been Tried and Their Metal Proved.

In order to make the most of the stove business, the most important point is to see that you have high quality goods. The man who pays attention to this and goes after the business in the right way cannot help building up a good trade. When you handle a good stove—one that you know you can guarantee and back to the limit—it inspires confidence in your purchasers.

Then, too, with a good line you can get a good price, and most people will sooner pay a little more for an article they know is good than buy one they are not sure about for a little less money.

A man must have absolute confidence in what he sells so that he will be able to instill that confidence into his customers. If you can convince the customer that you have implicit faith in the stove, the battle is practically won.

The line of conversation to be used by the salesman will, of course, be governed by the customer. If the salesman is talking to a woman he should dwell more upon the quality of performance than the mechanical construction of the stove. A woman takes pride in the appearance of her kitchen. She is compelled to, in order to escape the scathing criticism to which she would otherwise be subject from her numerous callers.

Witten says that if he were making the American dollar, he would substitute a stork for the eagle, because the latter does nothing but scream, while the former delivers the goods every crack.

Business Sentiment Less Depressed—Encouragement in Satisfactory Action on Tax Reduction.

Non-Ferrous Metal Prices Lower—Dawes' Report Being Closely Watched—Zinc and Tin Easy.

FINANCIAL sentiment has been a little less depressed recently. It has found encouragement in prospects for fairly satisfactory action on the tax measure, in dwindling interest in congressional mudslinging, and in the outlook for Europe.

The foreign situation is dominated by the forthcoming report by the Dawes-McKenna committees. This report will not result in final and complete settlement of all of Europe's ills. It should, however, lay the basis for the most nearly business-like reparations agreement yet proposed.

That will be a distinct forward step. More than likely the coming years will compel far-reaching changes in any arrangement that could be made now. But the important thing is that a start toward the goal of European economic recuperation may be made.

Some recession in industrial production is favorable. Outputs rose with great rapidity early in the year. Clearly they have overtaken and in some cases outstripped consumptive needs. Piecemeal buying is tending to keep production in line with current requirements.

In the automobile industry curtailment is apparent. The March record of output was 3 per cent below that of February. This is the first time that a decline in production in March was ever recorded in the industry.

Copper.

The copper market has been quiet, with producers quoting 13.62½ cents, delivered, on domestic business for prompt and second quarter delivery; 13.75 cents, c.i.f. foreign port on export business. Lake copper has been quoted 13.75 cents; casting, 13.37½ cents. Secondary material has been moving slowly with prices unchanged. Ac-

quisition of a plant in Cleveland by the Nichols Copper Company to produce blister copper from scrap has been a feature of the secondary trade.

Chicago quotations are 21 cents per pound for base and 20½ cents mill base per pound.

Tin.

The New York market has followed London and prices here are about 1¼ cent lower. Business has been done in Straits tin for April, May and June deliveries and for January - February, February-March shipments from the Straits at 50.50 cents.

May-June shipment has been offered for sale at 50.37½ cents, but buyers show little interest in the far off positions. The price of spot Straits is entirely nominal at 51.25 cents but there are offerings for delivery from steamers at dock at 50.75 cents and it is expected that the tin will be available for delivery this week.

Chicago prices on Pig tin are 52¾ cents per pound; Bar, 54¾ cents.

Solder.

Chicago warehouse prices on solder are as follows: Warranted, 50-50, \$32.50; Commercial, 45-55, \$31.75, and Plumbers', \$30.50, all per 100 pounds.

Lead.

The abnormally high prices above 9 cents for lead caused buyers to move extremely cautiously to avoid accumulating high cost stocks and when the market showed signs of slipping the caution increased.

In consequence, business has been only for must requirements and has been extremely scattered. The American Smelting & Refining Company reduced its official contract price \$5 a ton or ¼ cent a

pound April 3 to 8.75 cents, New York. Independent sellers dropped their quotations to 8.50 cents, New York, and to 8.20 cents, East St. Louis, for prompt, April or May shipment.

Chicago prices on American Pig are 8.50; Bar, 9.50.

Zinc.

The zinc market was firm, due to reluctance of sellers to compete at present price levels under conditions of inflexible costs as at present created by the pegged ore price, but today it was easy.

Demand from galvanizers and brass mills has been slow, reflecting the light bookings of these consumers. The prime western zinc price for prompt and April shipment moved up to 6.32½ cents to 6.35 cents, East St. Louis and then back to 6.30 cents; high grade is steady at 8.25 cents to 8.50 cents; brass special commands 10 points premium over prime western.

Chicago prices on slab zinc are 7.20; sheet zinc cask lots, 12.25; less than cask, 12.50.

Wire and Nails.

Although unfilled orders for wire products are not as large as makers would desire, they are comfortable and a pleasing day-to-day business is being done.

Individual orders are small and for the most part come from jobbers needing replacements. Some small town jobbers report the backward season and poor roads have hurt sales.

Small nails and some kinds of wire continue active and on these products deferred deliveries are being named.

Prices for the most part are firm although it is understood some larger buyers were able to obtain a figure under 2.75 cents base Pittsburgh, on plain wire and 3.00 cents

—the automobile crank shaft—which must withstand the tremendous strains of heat and explosion.

—the crimped bottle cap—that wonderful spring-tension stopper which prevents the escape of highly compressed and volatile gases.

—the engineers oil can—pushed by mighty pressure from a flat sheet of steel] to a symmetrical, seamless container.

—the aeroplane tank—racked and wrenched in flight, pounded and jarred in landing.

These are some of the exacting requirements successfully met by the House of Taylor.

But your *roofing* must withstand not only the heat of the sun and fire—the bending and strain of tool or wind or frost—the pounding of hail, bricks, and limbs of trees—your *roofing must also be lastingly waterproof*.

Here again the House of Taylor successfully met a problem. Installations of Taylor's roofing tin applied to buildings sixty years ago are still on the roofs rendering satisfactory protective service!

The House of Taylor prides itself on successfully meeting the problems of many lines of industry, but above all, it is proud of its record in fulfilling the need for a long lasting, fireproof, inexpensive roofing and flashing material.

Today Taylor's Target-and-Arrow is coated by the same painstaking, method of hand-dipping used in years gone by. It is carried in stock by leading distributors located in all parts of the U. S. A.

N. & G. TAYLOR COMPANY

PHILADELPHIA
H. N. TAYLOR, President

*Established in the U. S. A. in 1810 by William, George and Tracy Taylor,
descendants of Major John Hanbury of the Hanbury-Tracy family, who
introduced the art of tinning into Wales in 1703.*

base Pittsburgh, on wire nails. Where southern Ohio nails enter into competition with the Pittsburgh product, freight rates are being equalized.

Bolts and Nuts.

Business is not good in nuts, bolts and rivets, buying from day to day being insufficient to satisfy all producers. In this situation, the tendency is to seek by price cuts to gather a share of the going business and the price situation is generally unsettled. Where the open market quotation on large machine bolts is 60 and 5 off, some orders have been taken at 60 and 10 off, while particularly attractive orders developed a 60, 10 and 5 per cent discount. Shipments are well distributed, jobbers placing orders as material is needed. Some railroads are buying nuts and bolts as well as rivets. Some fair sized orders for rivets have been placed by car builders and equipment companies. Rivets in attractive lots have gone as low as 2.65 cents, Pittsburgh.

Tin Plate.

As is usual in such cases, the source of the rumor last week that the tin plate price for the third quarter was about to be made has not been ascertained. As to the authority for the rumor, that is not ascertainable for the simple and sufficient reason that there is none. Development of the tin plate price for the third quarter is not in sight.

There is much talk about there being an advance in tin plate for third quarter, over the \$5.50 price ruling for the past year.

The most prevalent argument just now would be that on November 1, 1923, when the \$5.50 price was reaffirmed for the present half year, sheet bars were \$42.50 as they are now, while pig tin was 41.87½ cents, while it is now ten cents higher, hence 17½ cents advance on a box of tin plate.

One might also figure, however, that a year ago, April 26th, tin plate was \$5.50, ton 44.12½ cents and sheet bars \$45.00. At 1¾ pounds of tin per box and 20 boxes to the ton of sheet bars, which are only ap-

proximate figures, of course, there would be 12½ cents advance on account of tin and 12½ cents reduction on account of sheet bars, i.e., no change from \$5.50.

Sheets.

There is no change as to sheet prices. The American Sheet & Tin Plate Company holds strictly to the old prices, 3.00 cents for blue annealed, 3.85 cents for black and 5.00 cents for galvanized. The independents quite generally, though not universally, shade these prices \$2.00 a ton on black and galvanized and \$2.00 to \$3.00 a ton on blue annealed. Independents obtain 3.85 cents on black occasionally, and 5.00 cents on galvanized more frequently, but they seem to be doing little on blue annealed except at 2.85 cents and 2.90 cents.

The two great questions are whether the leading interest will reduce its prices and whether the in-

dependents will make greater concessions. As to the leading interest there are no indications that it will reduce. It has given no hint to customers that it will, and there is the circumstantial evidence of the item we reported a week ago, that the company's sheet bookings in March were the largest for any month since October.

Old Metals.

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$17.50 to \$18.50; old iron axles, \$25.50 to \$26.00; steel springs, \$19.50 to \$20.00; No. 1 wrought iron, \$13.50 to \$14.00; No. 1 cast, \$18.25 to \$18.75, all per net tons. Prices for non-ferrous metals are quoted as follows, per pounds: Light copper, 9 cents; light brass, 5½ cents; lead 5½ cents; zinc, 3¾ cents, and cast aluminum, 16½ cents.

Trade in Pig Iron Remains Dull—Prices Show More Weakness.

Buying Limited Everywhere to Small Prompt Lots—Chicago Price at \$24.50.

LISTLESSNESS and indifference are typical of pig iron buyers' attitude at Pittsburgh. Deliveries on contracts are heavy. Two producers report shipments exceed production. Users are asking furnaces to expedite deliveries. Sales for several days have involved only single carload or 100-ton lots. No inquiries are pending. The reduction in ore prices is discounted, as ore at the new figures will not reach furnaces until summer or next fall.

Activity at Chicago in the pig iron market has dropped to a low ebb and sales of 100-ton lots now are scarce. Shipments on contracts are heavy, and in this respect April is starting out on the same level with March, which was better than February. Car wheel, automobile and implement foundries are melting less iron, but the general jobbing foundries are holding their own. Hope is entertained that the automobile business will revive with several weeks of good weather. Furnaces

are getting \$24.50 furnace for the small northern foundry and malleable business that is being done. One broker is selling small lots of malleable at \$24.

The general opinion is a good tonnage would develop a furnace price under \$24.50, but no such test of the market is in sight. Most melters are buying as little as possible, believing an advance is improbable and a reduction is possible when they have to buy.

Pig iron at Birmingham shows no improvement, sales are few and small, and in many instances for spot shipment. Quotations are weak and \$22.50 for No. 2 foundry is reported, with \$23 and \$23.50 as the common price. The Woodward Iron Company has been shipping its output and the Sloss-Sheffield Steel & Iron Company continues loading iron from stock, so that there is a general reduction of accumulated iron. The local melt of pig iron shows no decline.

Illustrations show elbows of all angles from 10 to 90°. Note how close each cluster of elbows hugs the walls.

Use short angle elbows to get around sills, cornice mouldings and all other projections, thus preventing the commonly known soldered break in the pipe.

By using combinations of this kind, soldering is not necessary as elbows fit into each other very snug and the small opening at the joints will permit sewer gases to escape, thus increasing the life of the entire spout.

These elbows are made in all designs and your dimensions can be arranged right on the job.

F. Dieckmann
TRADE MARK

This Emblem of Quality is stamped in each.

THE FERDINAND DIECKMANN COMPANY
P. O. Station B
Cincinnati, Ohio

Chicago Warehouse Prices on Hardware and Metals.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON.

Chicago Foundry..	24 50
Southern Fdy. No. 2	28 51 to 29 01
Lake Sup. Char-coal	29 04
Malleable	24 50

FIRST QUALITY BRIGHT TIN PLATES.

	Per Box
IC 14x20 112 sheets	\$12 45
IX 14x20	14 06
IXX 14x20 56 sheets	17 57
IXXX 14x20	18 12
IXXXX 14x20	18 65
IC 20x28 112 sheets	27 50
IX 20x28	29 25
IXX 20x28 56 sheets	18 15
IXXX 20x28	17 20
IXXXX 20x28	18 25

TERNE PLATES.

	Per Box
IC 20x28, 40-lb. 112 sheets	\$25 00
IX 20x28, 40-lb.	28 50
IC 20x28, 30-lb.	21 80
IX 20x28, 30-lb.	24 70
IC 20x28, 25-lb.	30 80
IX 20x28, 25-lb.	23 70
IC 20x28, 20-lb.	18 20
IV 20x28, 20-lb.	21 15
IC 20x28, 15-lb.	17 05
IC 20x28, 12-lb.	15 75
IC 20x28, 8-lb.	14 05

COKE PLATES.

Cokes, 80 lbs., base, 20x28	\$13 85
Cokes, 90 lbs., base, 20x28	14 10
Cokes, 100 lbs., base, 20x28	14 45
Cokes, 107 lbs., base, IC 20x28	14 85
Cokes, 135 lbs., base, IX 20x28	17 40
Cokes, 165 lbs., base, 56 sheets	9 75
Cokes, 175 lbs., base, 56 sheets	10 65
Cokes, 195 lbs., base, 56 sheets	11 70

BLUE ANNEALED SHEETS.

Base	per 100 lbs. \$8 50
------	---------------------

ONE PASS COLD ROLLED BLACK.

No. 18-20	per 100 lbs. \$4 50
No. 22-24	per 100 lbs. 4 55
No. 26	per 100 lbs. 4 60
No. 27	per 100 lbs. 4 65
No. 28	per 100 lbs. 4 70
No. 29	per 100 lbs. 4 75

GALVANIZED.

No. 16	per 100 lbs. \$4 85
No. 18-20	per 100 lbs. 5 00
No. 22-24	per 100 lbs. 5 15
No. 26	per 100 lbs. 5 30
No. 27	per 100 lbs. 5 45
No. 28	per 100 lbs. 5 60
No. 30	per 100 lbs. 6 10

BAR SOLDER.

Warranted	50-50
	per 100 lbs. 32 50

Commercial	45-55
	per 100 lbs. 31 75

Plumbers	per 100 lbs. 30 50
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ZINC.	7 20
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In Slabs	7 20
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SHEET ZINC.	12 25
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Cask lots, stock, 100 lbs.	12 25
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Less than cask lots, 100 lbs.	12 50
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BRASS.	17 1/4 c
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Sheets, Chicago base	19 3/4 c
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Mill Base	20 1/4 c
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Tubing, seamless, base	23 1/4 c
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Wire, base	17 1/4 c
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WIRE.	17 1/4 c
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COOPER.	17 1/4 c
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Sheets, Chicago base	21 c
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Mill base	20 1/2 c
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Tubing, seamless, base	23 1/2 c
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Wire, No. 9 & 10 B. & S. Ga.	17 1/4 c
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Wire, No. 11, B. & S. Ga.	17 1/4 c
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LEAD.	17 1/4 c
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American Pig	8 50
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Bar	9 50
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Sheet.	13 00
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Full Coils	per 100 lbs. 13 00
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Cut Coils	per 100 lbs. 13 25
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TIN.	13 25
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Pig Tin	per 100 lbs. 52 75
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Bar Tin	per 100 lbs. 54 75
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HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

ADZES.

Coopers'.	
Barton's	Net
White's	Net

AMMUNITION.

Shells, Loaded, Peters.	
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Loaded with Black Powder	18%
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Loaded with Smokeless Powder	18%
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WINCHESTER.

Smokeless Repeater	
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Grade	20 & 4%
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Smokeless Leader	20 & 4%
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Black Powder	20 & 4%
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U. M. C.

Nitro Club	20 & 4%
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Arrow	20 & 4%
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New Club	20 & 4%
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Gun Wads—per 1000.	
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Winchester 7-8 gauge	10 & 7 1/2%
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9-10 gauge	10 & 7 1/2%
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11-12 gauge	10 & 7 1/2%
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ASBESTOS.

Paper up to 1/16	.6c per lb.
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Rollboard	.64c per lb.
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Millboard 3/32 to 1/4	.6c per lb.
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Corrugated Paper (250 sq. ft. to roll)	\$.60 per roll
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BERLOY

This is the name with which our sheet metal products are marked. We mark them because we want them recognized as ours. In other words, we're proud of them.

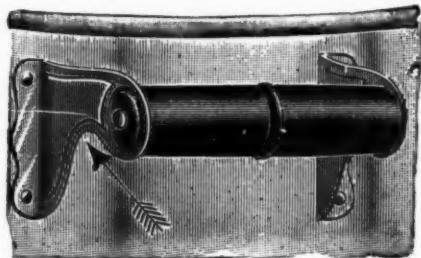
Thirty-five years of serving the sheet metal trade has taught us that fair dealing and quality products are the only basis upon which to build a business. On this policy we have grown to be one of the largest sheet metal factories in the world.

Our catalog shows the complete line of Trough, Pipe and Fittings, Roofing and Siding, Metal Ceilings and Galvanized and Black Sheets, etc. Address our nearest office—Dept. A-2.

THE BERGER MANUFACTURING CO., CANTON, O.

Boston, New York, Philadelphia, Chicago, St. Louis, Kansas City, Minneapolis, San Francisco, Los Angeles, Dallas, Roanoke, Jacksonville.

KEYSTONE BOILER HANDLES



We make a complete line of Boiler Handles. Also handles for Boiler Covers. Cut shows No. 40 style. Let us send you samples.

Complete catalog on request.

BERGER BROS. CO.

229 to 237 ARCH STREET PHILADELPHIA, PA.

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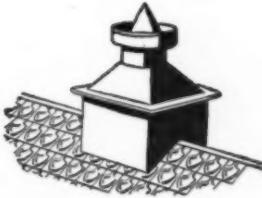
The difference between hand-dipped shingles and those stamped from galvanized sheets is this:

—Hand-dipped shingles are immersed *separately* in molten zinc after they have been stamped out of prime roofing tin.

The other shingles are not put through the hand-dipping operation because the sheets from which they are stamped are already galvanized. Hand-dipped of course are the better shingles, although we make both kinds.

We'll send our booklet, "Concerning That Roof" Cortright Metal Roofing Co. Philadelphia Chicago

Cortright Metal Shingles



*add to the reputation
of your products*

If they are exposed to the weather, make them of:

INLAND COPPER ALLOY STEEL SHEETS

Durable All the Way Through

INLAND STEEL COMPANY

38 South Dearborn Street, Chicago

Branch Offices

Milwaukee St. Paul St. Louis

Mills at Indiana Harbor, Ind., and Chicago Heights, Ill.

April 12, 1924.

Uniform, Collar Adjustable.	Doz.
6-inch	\$2.00
6-inch	2.10
7-inch	2.60

WOOD FACES—50% off list.

FENCE.

Field Fence	60 1/2%
Lawn	55%

FILES AND RASPS.

Heller's (American)	60-10%
American	60-10%
Arcade	50%
Black Diamond	40-10-5%
Eagle	50%
Great Western	50%
Kearney & Foot	50%
McClellan	50%
Nicholson	50%
Simonds	60%

FIRE POTS.

Ashton Mfg. Co.	Complete line
	Firepots and Torches...52%

Otto Bernz Co.	No. 1 Furn. Gasolene with large shield, 1 gal.	\$ 6.75
	No. B Furn. Kerosene, 1 gal.	15.12
	No. 10 Brazier, Kerosene or Gasolene, 10 gals.	47.52
	No. 5 Torch, Gasolene or Kerosene, 1 pt.	7.92
	No. 83 Torch, Gasolene, 1 quart	5.40
	No. 86 Torch, Gasolene, 1 pt.	4.05

Clayton & Lambert's.	East of west boundary line of Province of Manitoba, Canada, No. Dakota, So. Dakota, Nebraska, Kansas, Oklahoma, Amarillo, San Angelo and Laredo, Texas	52%
	West of above boundary line	48%
Geo. W. Diner Mfg. Co.	No. 02 Gasolene Torch, 1 qt.	\$ 5.55
	No. 0250, Kerosene or Gasolene Torch, 1 qt.	7.50
	No. 10 Tinner's Furn. Square tank, 1 gal.	12.60
	No. 15 Tinner's Furn. Round tank, 1 gal.	12.00
	No. 21 Gas Soldering Furnace	3.60
	No. 110 Automatic Gas Soldering Furnace	10.50
Double Blast Mfg. Co.	Gasolene, Nos. 25 and 35	60%
Quick Meal Stove Co.	Vesuvius, F.O.B. St. Louis 30% (Extra Disc. for large quantities)	

Chas. A. Hones, Inc.	Buzzer No. 1	\$ 9.00
	2	12.00
	22	13.50
	42	15.00
	43	19.00

FREEZERS—ICE CREAM.

Peerless and Alaska	
1 quart	\$2.95
2 quart	3.45
3 quart	4.10

White Mountain	1 quart	\$4.85
	2 quart	5.65

GALVANIZED WARE.

Pails (Competition)	8 qt.	\$1.85
10-qt.	2.10	
12-qt.	2.30	
14-qt.	2.57	

Wash tubs, No. 1	\$6.25
No. 2	7.00
No. 3	8.25

GARAGE DOOR HARDWARE.

Stanley	All net
---------	---------

GAUGES.

Marking, Mortise, etc.	Nets
Wire	Disston's

GIMLETS.

Discount	65% and 10%
----------	-------------

GLASS.

Single Strength, A and B.	
all sizes	88 & 85%

Double Strength, A, all sizes	84%
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GREASE, AXLE.

Frazers'	1-lb. tins, 36 to case, per case	\$ 4.70
	3-lb. tins, 24 to case, per case	7.80
	5-lb. tins, 12 to case per case	7.20

	10-lb. tins, per dozen	10.40
	15-lb. tins, per dozen	13.80

	18-lb. tins, per dozen	19.80
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HAMMERS, HANDLED.

All V. and B.	Each, net
Blacksmiths' Hand	No. 6, 26-oz.
Engineers' No. 1	28 oz.
Farrier's, No. 7	7-oz.
Machinists', No. 1	7-oz.

Nail.

Vanadium, No. 41	20-oz.
each	1.59
Vanadium, No. 41 1/2	16-oz.
each	1.59

V. & B., No. 11 1/2	16-oz.
each	1.01

Garden City, No. 11 1/2	16-oz.
each	.75

Tinner's Riveting, No. 1	8-oz.
each	.79

Shoe, Steel, No. 1	18-oz.
each	.65

Tack.	
-------	--

Magnetic.	
-----------	--

No. 5, 4-oz.	each
81	

HAMMERS, HEAVY.

Farrrier's, No. 10	10-oz.
81	

HANDLES.

Axe.	
------	--

Hickory, No. 1	per doz.
4.00	

Hickory, No. 2	per doz.
3.00	

1st quality, second growth	6.00
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Special white, 2nd growth	5.00
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CHISEL.

Hickory, Tanged, Firmer	
-------------------------	--

assorted	per doz.
5.50	

Hickory, Socket, Firmer, Assorted	per doz.
7.00	

FILE.

File	per doz.
1.20	

HAMMER AND HATCHET.

No. 1 per doz.	\$0.90
Second Growth Hickory, per doz.	1.50

SOLDERING.

Per doz.	\$2.40
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HANGERS.

Conductor Pipe.	
-----------------	--

Milcor Perfection Wire	25%
------------------------	-----

Eaves Trough.	
---------------	--

Steel hangers	30%
---------------	-----

Triple Twist wire	10%
-------------------	-----

Milcor Eclipse Wire	20%
---------------------	-----

Milcor Triplex Wire	15%
---------------------	-----

Milcor Milwaukee Extension	1



Why we say
"Everything Used in Sheet Metal Work"

We carry one of the largest stocks of sheets to be found in the country—Black—Blue Annealed—Galvanized—Terne Coated and Special Finishes. Gauges and sizes have been selected as a result of definite knowledge of our customers' needs.

The illustration shown will convey an idea of our sheet stock and also shows where Osborn Quality Gutter and Conductor Pipe is made.

Your inquiries covering Sheets, Gutter or Conductor or, in fact, anything in either materials or equipment used by the sheet metal worker or furnaceman, will have our prompt attention.

Catalog No. 24, ready soon, will be sent on request.

The J. M. & L. A. OSBORN CO.

"Everything Used in Sheet Metal Work"

38th St. @ Superior Ave., Cleveland, O.

Buffalo Warehouse - 64-66 Rapin St.

**THE
STANDARD**

Ventilator



IS of the rotatable type and swings absolutely free in the slightest draft. The construction is scientifically correct and unusually strong. It works perfectly in all kinds of weather and handles 50% more air than stationary ventilators of equal size. Order from your jobber. Write for our catalog and prices today.

Manufactured by

STANDARD VENTILATOR CO.
LEWISBURG, PA.

Steel Ceilings

Side Walls and Cornices

Only first quality material used
Many neat designs of character.

Write today for our complete catalog giving descriptions and prices.

THE W. J. BURTON CO.

Junction Ave. and Federal St. and
436 Penobscot Bldg. Detroit, Michigan



**THE BIG VENT WITH THE GREAT PULL
ÆOLUS VENTILATORS**

Made in all sizes of all metals. We make quick shipments.
ÆOLUS DICKINSON CO.
 Vent Makers Since 1888
 3332-3352 South Artesian Ave. CHICAGO, ILLINOIS
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50-INCH FORMING ROLL

This Forming Roll is built in all standard sizes, with our Patented Opening Device by means of which it is opened and closed in a few seconds.

We build a complete line of Shears and Punches, all sizes, for hand or belt power.

Write for Catalog "B"

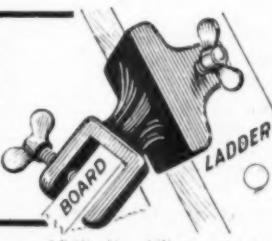
BERTSCH & CO., Cambridge City, Ind.



Sheet Metal Workers

when hanging gutter use the
TACK LADDER ADJUSTER.
 Price \$3.00 a set. Send for folder,
 the best tool on the market.

WINDHAM MFG. CO.
 Garrettsville, Ohio



PAILS.		POKERS, STOVE.		SAWS.		Rivet.		
Cream.		Wr't Steel, str't or bent, per doz.	\$0 75	Butchers'.	Atkins No. 2, 14-in.....	\$12 75	V. & B.	
14-qt. with gauge, per doz.	\$0 50	" No. 2, 18-in.....	14 30	" Farmers'	\$0 11			
18-qt. without gauge, per doz.	\$1 00	" No. 7, 18-in.....	15 85	" Tinn'rs' 3-4.....	\$0 44			
20-qt. without gauge, per doz.	\$1 75	" No. 2, 22-in.....	15 92	" 00-0.....	\$0 00			
Sap.		" No. 7, 20-in.....	18 05	Saw.	Atkins No. 10.....per doz.	\$1 98		
10-qt., IC Tin.....per doz.	\$4 00	" No. 7, 24-in.....	20 20	" No. 12....	" 6 14			
12-"	" 5 50	" No. 7, 28-in.....	22 35					
Stock.		POKERS, FURNACE.		Compass.			SHEARS.	
Galv. qts. 14 16 18 20		Each	\$0 50	Atkins No. 2, 10-in.....	\$5 45	Nickel Plated, Straight, 6"	Per Doz.	
Per doz. \$9 75 10 75 12 75 14 50		" Screw (en- cased).....per doz.	\$0 85	" 10, 10-in.....	5 60	" 7"	\$12 90	
Water.		PULLEYS.		" Blades, No. 2, 10-in	3 25	Japanned, Straight, 6"	\$11 00	
Galvanized qts. 10 12 14		Furnace Tackle.....per doz.	\$0 60	" No. 2, 10-in.....	3 30	" 7"	\$12 40	
Per doz.\$6 75 6 50 7 25		per gross	6 00	Cross-Cut.		" 8"	\$11 00	
PASTE.		" Small, per pair.....	0 30	Atkins No. 221, 4-ft.....	\$3 03	SHEARS, TINNERS' &		
Asbestos Dry Paste:		Large, per pair.....	0 50	" 6-ft.....	4 45	MACHINISTS'.		
200-lb. barrel	\$15 00	PUNCHES.		" 8-ft.....	6 07	Viking	\$22 00	
100-lb. barrel	8 00	Machine.	Each	Hand.				
25-lb. pail	3 25	V. & B., No. 11-13, 1½x6.....	\$0 19	Copper Burrs only.....	30%	Lennox Throatless.		
10-lb. bag	1 00	V. & B., No. 90, ¾x9.....	27	" No. 96, 20-in.....	21 70	No. 18	35%	
5-lb. bag	55	V. & B., No. 10, ¾x10.....	29	Hand and Rip.		Shear blades	10%	
3½-lb. cartons	30	V. & B., No. 1-6, ½x6.....	12	Atkins No. 54, 20-in.....	\$19 50	(f.o.b. Marshalltown, Iowa.)		
PINCERS.		Center.		" 54, 26-in.....	24 40	Peerless Steel Squaring.		
All V. & B.		V. & B., No. 50, ¾x4.....	\$0 14	" 53, 16-in.....	18 10	Foot Power.		
Carpenters', cast steel,		Belt.		" 53, 20-in.....	22 90	No. 1—30", 18 ga. cap.....15%		
No. ... 6 8 10 12		V. & B., No. 101-103.....	\$0 24	" 53, 24-in.....	26 60	No. 2—36", 18 ga. cap.....15%		
Each \$0 42 \$0 52 \$0 61 \$0 71		V. & B. No. 25, as't.....	3 80	" 53, 28-in.....	31 45	No. 4—52", 18 ga. cap.....15%		
Blacksmiths', No. 10.....	\$0 64	V. & B. No. 25, as't.....	3 80	" 53, 30-in.....	34 15	No. 10—120", 22 ga. cap.....15%		
PIPE.		Samson Line.		Keyhole.				
Conductor		No. 1 Hand	Doz. lots or less	40%	Atkins No. 1 complete.....	\$3 10	Cast Iron Foot Power.	
"Interlock" Galvanized.		No. 2 Hand	3 doz. lots ... Less 40 & 5%		" No. 2 complete.....	3 70	No. 01, 30", 18 ga. cap.....15%	
Crated and nested (all gauges)	60-20%	No. 4 Hand	6 doz. lots or more .. Less 50%		Miter Box.		Power Driven.	
Crated and not nested (all gauges)	60-15%		Less than doz. lots ... Less 25%		Atkins No. 1, 4x20.....	\$32 65	(No. 100 Series, 2 Shaft Drive.)	
Square Corrugated A and B and Octagon.		No. 3 Bench	Doz. lots or more...Less 40%		" 1, 5x22.....	38 00	No. 142—42", 18 ga. cap.....15%	
29 Gauge	60-10%		Less than doz. lots ... Less 25%		" 1, 6x22.....	42 20	(No. 200 Series, 2 Shaft Underneath Drive.)	
28 "	60-10%		No. 4 Hand	Doz. lots or more...Less 40%	Pruning.		No. 242—42", 14 ga. cap.....15%	
26 "	60-10%		No. 1 Hand	Less than doz. lots ... Less 25%	Atkins No. 20, 12-in.....	\$8 45	(No. 300 Series, 3 Shaft Underneath Drive.)	
24 "	60-10%		No. 2 Hand	Doz. lots or more...Less 40%	" 10, 16-in.....	18 15	No. 342—42", 10 ga. cap.....15%	
"Interlock."			No. 3 Bench	No. 4 Hand	Wood.		No. 372—72", 10 ga. cap.....15%	
Crated and nested (all gauges)	60-20%				Atkins No. 202.....	\$7 19	(No. 500 Series, 3 Shaft Underneath Drive.)	
Prices for Galvanized Toncan Metal, Genuine O. H. Iron, Lyonnaise Metal and Keystone C. B. on application.					" 318.....	8 75	No. 596—96", 10 ga. cap.....15%	
Stove. Per 100 Joints					" 906.....	15 50	No. 600 Series, 3 Shaft Underneath Drive.)	
26 gauge, 6 inch E. C. nested	17 00				" 1509.....	16 56	No. 6120—120", 3/16" cap.15%	
26 gauge, 7 inch E. C. nested	19 00						SHOES.	
28 gauge, 5 inch E. C. nested	14 00						Mileor.	
28 gauge, 6 inch E. C. nested	15 00						Galv. Std. Gauge, Plain or corg. round flat crimp.....85%	
28 gauge, 7 inch E. C. nested	17 00						26 gauge round flat crimp.....40%	
30 gauge, 5 inch E. C. nested	12 00						24 gauge round flat crimp.....10%	
30 gauge, 6 inch E. C. nested	13 00						Conductor	85%
30 gauge, 7 inch E. C. nested	15 00						SHOVELS AND SPADES.	
T-Joint Made up, 6-inch, 28 ga.per 100 \$2 50							Coal.	
Furnace Pipe.							Hubbard's.	
Double Wall Pipe and Fittings	40-10%						No. A B C D	
Single Wall Pipe, Round Pipe Fittings	40-10%						1 \$16 00 15 10 14 45 13 70	
Galvanized and Black Iron Pipe, Shoes, etc. 40-10%							2 16 25 15 60 14 85 14 10	
Milcor Galvanized	40%						3 16 75 16 00 16 25 14 40	
PLANES.							4 17 10 16 35 15 60 14 88	
Stanley Iron Bench.....Net								
PLIERS.							Post Drains & Ditching.	
(V. & B.)							Hubbard's.	
Nut, No. 3, each.....	\$2 60						Size A B C	
" No. 5, each.....	64						14"\$17 15 \$16 40 \$15 65	
" No. 25, each.....	69						16"17 50 16 75 16 00	
Gas, No. 7, each.....	55						18"17 85 17 10 16 85	
" No. 8, each.....	61						20"18 20 17 45 16 70	
" No. 12, each.....	87						22"18 55 17 80 17 05	
Lining or Crimping.								
No. 35, each	64						Alaska Steel.	
Button's Pattern.							D-Handle	per doz. \$2 50
No. 6 each.....	61						Long Handle	3 00
No. 8 each.....	74						SIFTERS.	
Double Duty, No. 105.....	50						Genuine Hunters, doz.....\$2 50	
POINTS, GLAZIERS'.								
No. 1, 2 and 3..per doz. pkgs. 65c							SKATES.	
							Ice, Men's and Boys'. Per Pair	
							Key Clamp—rocker—bright	
							finish	7 75
							Key Clamp—rocker—nickel	
							finish	1 10
							Key Clamp—rocker — pol- steel	
							1 35	
							Key Clamp—rocker — pol- steel	
							4 75	
							Women's and Girls'.	
							½" Key Clamp—rocker....\$1 81	
							½" " " " hockey....1 22	
							Ice Skate outfit.....5 00	
							Roller.	
							Ball Bearing—Boys'	\$1 45
							Ball Bearing—Girls'	1 55